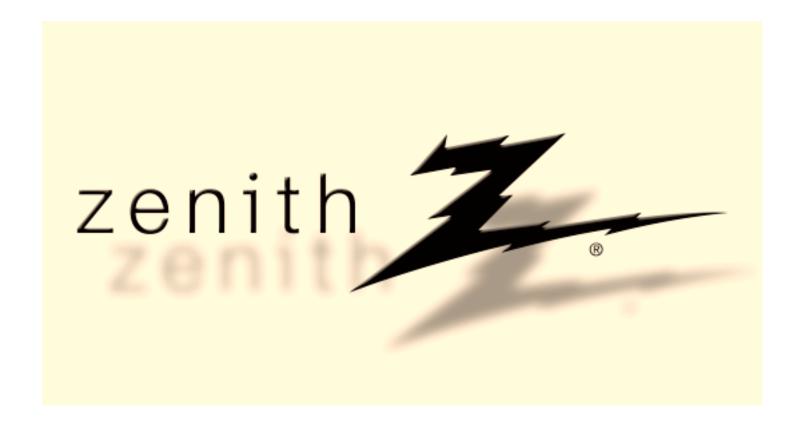
Operating Guide | Warranty

Model Numbers | C32V23, C36V23, C34W23 | Digital TVs





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RECORD YOUR MODEL NUMBER

The model and serial number of your Entertainment Machine™ are located on the back of the TV cabinet. For your future convenience, we suggest that you record these numbers here:

Model No.	
Serial No.	







WARNING:

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

POWER CORD POLARIZATION:

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

NOTE TO CABLE/TV INSTALLER:

This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

REGULATORY INFORMATION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following

- easures: Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - · Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

CAUTION:

Do not attempt to modify this product in any way without written authorization from Zenith Electronics Corporation. Unauthorized modification could void the user's authority to operate this product.

COMPLIANCE:

The responsible party for this product's compliance is:

Zenith Electronics Corporation, 2000 Millbrook Drive, Lincolnshire, IL 60069, USA • Phone: 1-847-941-8000.

IMPORTANT SAFETY INSTRUCTIONS

Important safeguards for you and your new product

Your product has been manufactured and tested with your safety in mind. However, improper use can result in potential electrical shock or fire hazards. To avoid defeating the safeguards that have been built into your new product, please read and observe the following safety points when installing and using your new product, and save them for future reference.

Observing the simple precautions discussed in this operating guide can help you get many years of enjoyment and safe operation that are built into your new product.

This product complies with all applicable U.S. Federal safety requirements, and those of the Canadian Standards Association.

1. Read Instructions

All the safety and operating instructions should be read before the product is operated.

2. Follow Instructions

All operating and use instructions should be followed.

3. Retain Instructions

The safety and operating instructions should be retained for future reference.

4. Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

5. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

6. Water and Moisture

Do not use this product near water for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.

7. Accessories, Carts, and Stands

Do not place this product on a slippery or tilted surface, or on an unstable cart, stand, tripod, bracket, or table. The product may slide or fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

8. Transporting Product

A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

9. Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

10. Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

11. Power Sources

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

12. Power Cord Polarization

This product is equipped with a polarized alternating - current power plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

13. Power Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

(Continued on next page)

206-3706 2-WR-POLZ P A G E 3

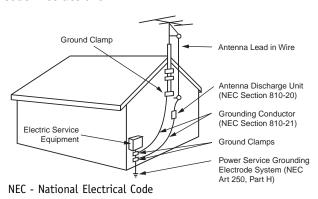
IMPORTANT SAFETY INSTRUCTIONS

(Continued from previous page)

14. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code (U.S.A.), ANSI/ NFPA 70 provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Example of Grounding According to National Electrical Code Instructions



15. Lightning

For added protection for this product (receiver) during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

16. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

17. Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

18. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

19. Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

20. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. If the power-supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the product.
- c. If the product has been exposed to rain or water.
- d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- e. If the product has been dropped or the cabinet has been damaged.
- f. If the product exhibits a distinct change in performance.

21. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

22. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

23. Wall or Ceiling Mounting

The product should be mounted to a wall or ceiling only as recommended by the manufacturer. The product may slide or fall, causing serious injury to a child or adult, and serious damage to the product.

24. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

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Table of Contents

Refer to the information below to hook up external equipment and set up the features on your TV. As a aid to installing and setting up your TV, see the Setup Checklist on the next page...

Step 1. Hook up external equipment and antenna or cable service wires to the TV. Install batteries in the remote

control. After <u>all</u> connections have been made, plug y Step 2. Go to page 18 to use EZ Scan. (Search for and memor Step 3. Set up all other TV options see pages listed below.	your TV into standard household power, see pages 7 thru 17. rize all the channels available in your area.)
Safety Warnings	Weak Signal, Video Game, Sports), Contrast, Brightness, Color, Tint, Sharpness, Color Temp, Z-View
	Audio Menu
Step 1. Hook Up TV	Audio Mode: (Mono, Stereo, SAP), EZ SoundRite, EZ Sound:
Setup Checklist (what you need to do to get the TV working) 6	(Custom, Normal, Stadium, News, Music, Theater) Balance,
Connection Panel Jacks Overview	Treble, Bass, Speakers, Front Surround.
Equipment Connection Options	Time Manu
Antenna, Install batteries in remote	Time Menu Clock
Cable Service, Install batteries in remote	Off Timer
Cable Service with VCR, Install batteries in remote control 11	On Timer
S-VHS VCR, Install batteries in remote control	Sleep Timer
High-Definition Hook up	Special Menu
Audio/Video Signal Output	Aspect Ratio
Digital Audio Output16	Analog Caption
Front Panel Controls/Inputs	Language
Step 2. Reception Setup and Channel Search	
EZ Scan, Select: Antenna, DTV, or Cable service and let the channel search memorize channels in your area	Lock (Parental Control Menu)
Remote Control Key Functions in TV mode	Remote Control Programming
Source Selection Options	Set up remote to operate other devices
On-Screen Menus/Displays Overview	Mode Sound Switch Setup43
Other Functions and On-Screen Displays 24	Verify Mode's 3-Digit Code
	AutoSearch
Step 3. Customize the TV's Features	Programming Product Brand Codes
Setup Menu (Start with page 18, EZ Scan)	Remote Modes Key Functions
Channel Edit	Troubleshooting
DTV Signal	Glossary
Channel Labels	Notes
Input Source	Zenith Warranty Back Cover
Video Menu	

Note: Design and specifications are subject to change without prior notice.

Setup and Operation Checklist

Setup and Operation Checklist

(See page 5 for available connection and operational setup options.)

- 1. Unpack TV and all accessories.
- 2. Connect your TV to input sources: antenna and all video source equipment. See pages 7 14.
- 3. Connect TV output to all external video and audio equipment see pages 7, 15, 16.
- 4. Install batteries in remote control. See any page 8 through 14.
- 5. Plug TV and source equipment into power outlets. See pages 8 through 14.
- 6. Turn TV on.

 See pages 17 (Front Panel) and 19 (Remote Control).
- 7. Choose on screen menu language.

 See page 37. (English is selected.)
- 8. Use EZ Scan* to search for all channels in your area. See page 18.
- 9. Turn video source equipment on.
- 10. Select viewing source for TV.
 See pages 21 and 29
- 11. Fine-tune source image and sound to personal preference or as required by source. See pages 30, 31, and 35.
- 12. Additional features Setup See Table of Contents.

*EZ Scan/Channel Search Notes -Available Channels/Active Channels/DTV Channels

EZ Scan finds channels which have a signal present and are actively being broadcast. Some broadcasters do not provide or send or broadcast a signal continuously. As a result, some DTV channels may not be found with EZ Scan. If you know that there is a DTV channel that was not found by EZ Scan, run EZ Scan again; when the DTV channel is actually sending out a program.

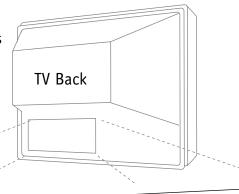
PAGE 6 206-3767

"Source" Connection Panel Overview

Use this page for reference to connect: High Definition equipment, Standard Definition equipment, DVD Player, and VHS equipment.

To hook up source equipment, see below and also refer to the Table of Contents on page 5; shows pages to go to for equipment hookup options. Also, see the front connections panel source's hookup options on page 17.

After you have finished hooking up your source equipment, go to page 18 and use EZ Scan to search for and find all the available channels in your area.

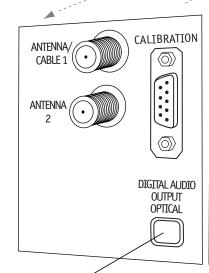


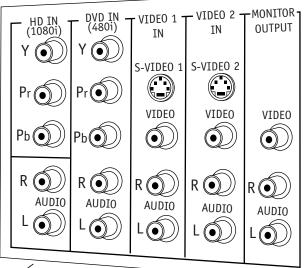
ANTENNA/CABLE 1 ANTENNA 2

Use Antenna/Cable 1 to hookup an antenna or cable system.
See pages 8, 9, 10, 11, 12.

To hookup both digital and analog sources, use ANTENNA/CABLE 1 and ANTENNA 2.

Refer to EZ Scan on page 18, to see digital and analog hookup options.





DIGITAL AUDIO OPTICAL OUTPUT

Connects to external audio equipment like a stereo system. See page 16.

HD IN 1080i

Connect high-definition component video equipment here.

-EDTV Set top Box, 1080i -HDTV Set top Box, 1080i See page 14.

DVD IN 480i

Connect standard component video equipment or DVD player here.
-DVD Player, 480i
-SDTV Set top Box, 480i
See page 13.

VIDEO 1 IN VIDEO 2 IN

Connect your Audio/Video or S-Video equipment to these jacks. See pages 10, 11, 12.

Important Antenna/Cable-Digital/Analog Connections Note:

If you use both digital and analog equipment to receive your TV channels, use both Antenna/Cable 1 and Antenna 2 jacks. Refer to EZ Scan on page 18, to see digital and analog hookup options.

VIDEO / R - L AUDIO OUT

Use these output jacks to connect external audio/video equipment.

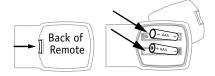
See page 15.

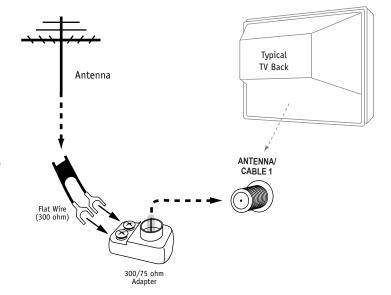
206-3767 PAGE 7

Hook Up an Off-Air Antenna

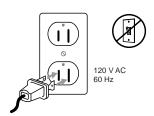
Connect an off-air antenna

- Locate the Antenna/Cable 1 jack on the back of your TV.
- Connect the antenna wire that runs from the wall directly to this jack, according to one of the diagrams to the right.
- Remove the back of the remote and put in two "AAA" batteries.





Plug in your TV. Your TV is designed to operate on standard household current, 120-volt 60 Hertz AC. Do not plug it into an outlet controlled by a switch. Do not attempt to operate it on DC power.

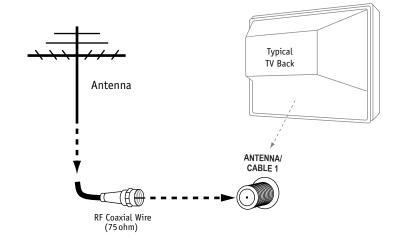




If you have a 75 ohm RF cable, then you don't need any adapters!



A 300 to 75 ohm adapter is not included with the TV.



Mini glossary

75 OHM RF CABLE The wire that comes from an off-air antenna or cable service provider. Each end looks like a hex shaped nut with a wire

sticking through the middle, and it screws onto the threaded antenna/cable jack on the back of your TV.

300 TO 75 OHM A small device that connects a two-wire 300 ohm antenna to a 75 ohm RF jack. They are usually about an inch long with two screws ADAPTER on one end and a round opening with a wire sticking out on the other end.

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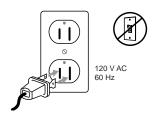
Hook Up Cable Service (CATV)

Connect cable service to your Entertainment Machine

- Locate the Antenna/Cable jack on the back of the TV.
- Connect the cable service wire that runs from the wall or cable box directly to this jack, according to one of the diagrams to the right.
- 3 Remove the back of the remote and put in two "AAA" batteries.

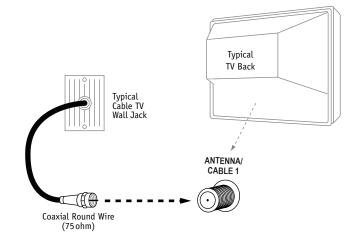


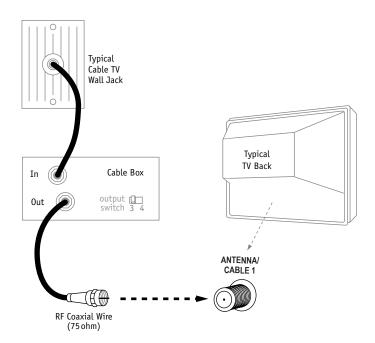
4 Plug in your TV. Your TV is designed to operate on standard household current, 120-volt 60 Hertz AC. Do not plug it into an outlet controlled by a switch. Do not attempt to operate it on DC power.



If you're using a cable box, leave the TV on channel 3 or 4 and use your cable box to change channels.

> If you're using a cable box, EZ Scan might only find the channel your cable service is on (usually channel 3 or 4). Don't worry, that's all you need!









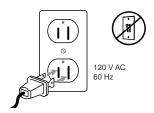
Hook Up a VCR

Connect a VCR to your TV

- Locate the Antenna In jack on the back of the VCR.
- Connect the wire that runs from the antenna, according to the diagram to the right. Make any other connections as necessary.
- Remove the back of the remote and put in two "AAA" batteries.



Plug in your TV. Your TV is designed to operate on standard household current, 120-volt 60 Hertz AC. Do not plug it into an outlet controlled by a switch. Do not attempt to operate it on DC power.

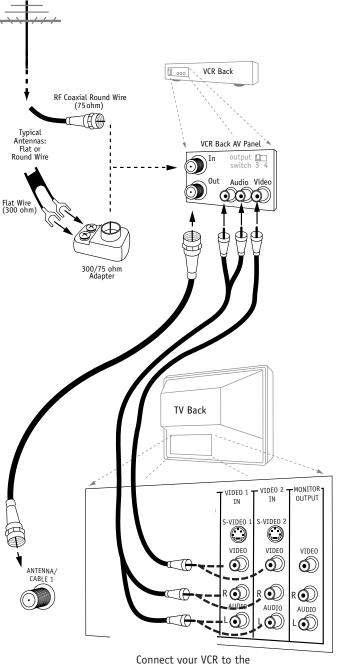


 $)_{\circ}^{\circ}$

No adapters or A/V cables are included with the TV. See your Zenith dealer to purchase any adapters or cables.



Without A/V cables, most VCRs will not play videocassettes in stereo sound.



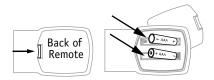
Connect your VCR to the Video 1 or Video 2 set of input jacks

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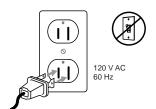
Hook Up Cable Service (CATV) and VCR

Connect Cable service and a VCR to the TV

- Locate the Antenna/Cable In jack on the back of the VCR.
- Connect the cable service wire that runs from the wall, according to one of the diagrams to the right. Make any other connections necessary for your setup.
- Remove the back of the remote and put in two "AAA" batteries.

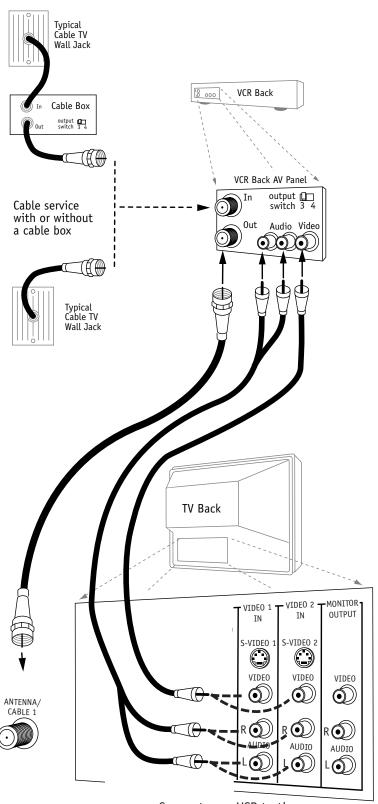


Plug in your TV. Your TV is designed to operate on standard household current, 120-volt 60 Hertz AC. Do not plug it into an outlet controlled by a switch. Do not attempt to operate it on DC power.



Tune both the VCR and the television to channel 3 or 4 (cable box output channel) and use the cable box to change channels.

No A/V cables are included with your TV. Without A/V cable hookups, most VCRs will not play videocassettes in stereo sound.



Connect your VCR to the Video 1 or Video 2 set of input jacks

Your Zenith TV may be connected to a Super-VHS VCR through the S-Video Input located on the front or rear source connection panels on your TV

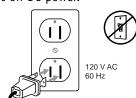
Hook up your S-VHS VCR to your Zenith TV according to the diagram shown at the right.

Remove the back of the remote and put in two "AAA" batteries.

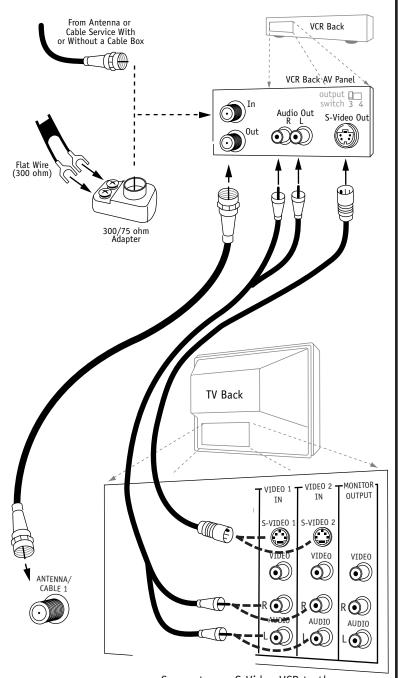




Plug in your TV. Your TV is designed to operate on standard household current, 120-volt 60 Hertz AC. Do not plug it into an outlet controlled by a switch. Do not attempt to operate it on DC power.



On the remote, press SOURCE repeatedly until "Video1 or Video2" is displayed. Or use the Source menu to choose the Video1 or Video2 input the equipment is connected to.



Connect your S-Video VCR to the S-Video 1 or S-Video 2 set of input jacks

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4

Hook Up Component Video Equipment



The DVD IN Input jacks will only accept an interlaced signal. Switch your DVD player or set-top box to interlaced.

Connecting component video DVD equipment

DVD IN (480 Interlaced only)

Connect standard component video equipment or a DVD player here.

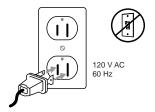
DVD Player, 480i SDTV Set top Box, 480i

Make the connections as indicated. (Appearance of components may vary from those in the illustrations.)

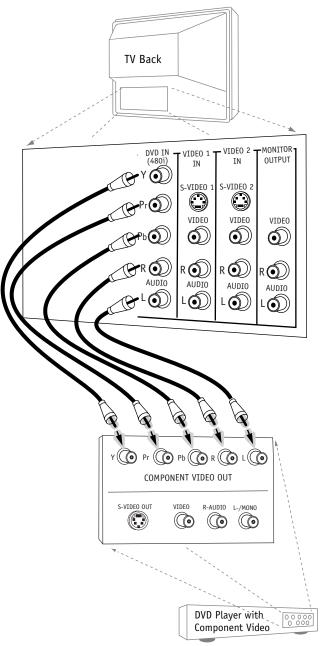
Remove the back of the remote and put in two "AAA" batteries.



Plug in your TV. Your TV is designed to operate on standard household current, 120-volt 60 Hertz AC. Do not plug it into an outlet controlled by a switch. Do not attempt to operate it on DC power.



- Press POWER to turn TV on.
- On the remote, press SOURCE repeatedly until "DVD IN" is displayed. Or use the Source menu to choose DVD IN.
 - Component video jacks are sometimes labeled with CR, CB, or PB, PR. In this case, connect B to B and the R to R. The "Y" jack is usually labeled "Y", connect Y to Y.
 - DVD IN input does not accept progressive (480p/720p) or interlaced (1080i) video formats.



Hook Up HD Equipment



The HD IN Input jacks will only accept a 1080i interlaced signal. Switch your set-top box to interlaced.

Connecting high-definition equipment

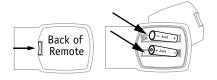
HD IN (1080i Interlaced only)

Connect high-definition component video equipment here.

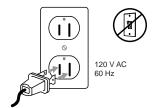
HDTV Set top Box, 1080i

- Make the HD connections as indicated.

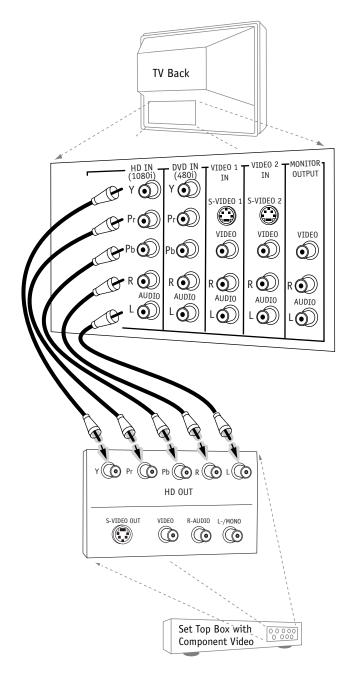
 (Appearance of components may vary from those in the illustrations.)
- Remove the back of the remote and put in two "AAA" batteries.



Plug in your TV. Your TV is designed to operate on standard household current, 120-volt 60 Hertz AC. Do not plug it into an outlet controlled by a switch. Do not attempt to operate it on DC power.



- 4 Press POWER to turn TV on.
- On the remote, press SOURCE repeatedly until "HD-In" is displayed. Or use the Source menu to choose HD-In.
 - HD IN input does not accept progressive (480p/720p) or interlaced (480i) video formats.



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Audio/Video Signal Output

Output to Audio/Video devices

Make the Audio/Video Output connections as indicated. (Appearance of devices may vary from those in the illustrations.)

Video Output

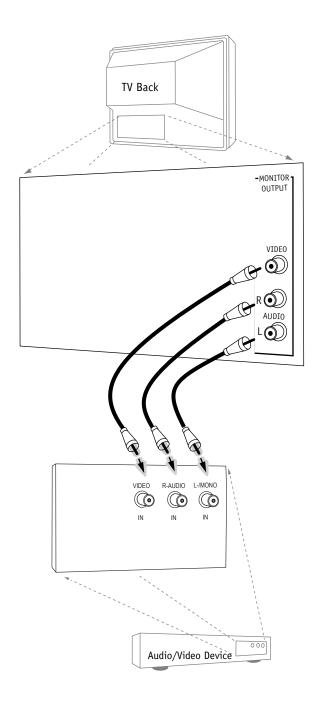
Use the Video Out jack to connect to an external video device.

Audio Output

Use the Left and Right Audio Out jacks to connect an external amplifier and speakers. (Refer to the Audio Menu on page 31 for instructions on how to turn the TV's internal speakers off and on.)

Select Audio/Video Input on the external device to see the image and hear the sound from the TV.

oo If you are watching a DIGITAL CHANNEL or the source connected to the HD-IN or DVD-IN jacks, MONITOR OUTPUT is not available.



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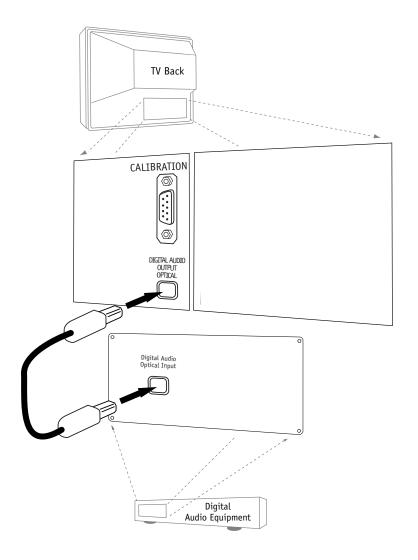
Digital Audio Output

Send the TV's audio out to external audio equipment (stereo system) via the Digital Audio Optical Output port

- Connect one end of an optical cable to the TV Digital Audio Optical Output port.
- Connect the other end of the optical cable to the digital audio optical input on the audio equipment.
- See the external audio equipment instruction manual for operation.



Caution: Do not look into the optical output port. Looking at the laser beam may damage your vision.



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Front-Side Panel Controls/Inputs

Using the front/side panel to operate the TV's basic features and to make temporary connections

Menu Operation

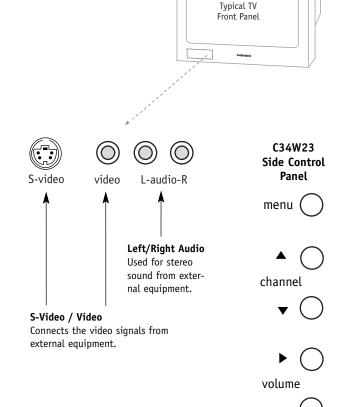
- Press MENU to place menus on screen.
- Use Channel Up/Down to select menu option.
- 3 Use Volume Left/Right to adjust menu option.
- Use MENU to remove menus from screen.

TV Operation

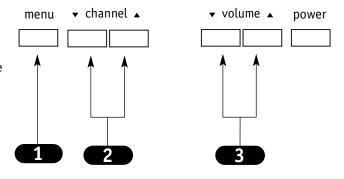
- 1 Press POWER to turn TV on and off.
- Use the CHANNEL Up/Down buttons to select the next higher/lower channel number
- Use the VOLUME Left/Right buttons to adjust the sound level quieter or louder to your preference.

Temporary Connections

- Connect your video equipment like a Camcorder to the Front Video input jacks.
- On the remote control, use Source to choose Front Video, or use the Source menu to choose the Front Video input source.



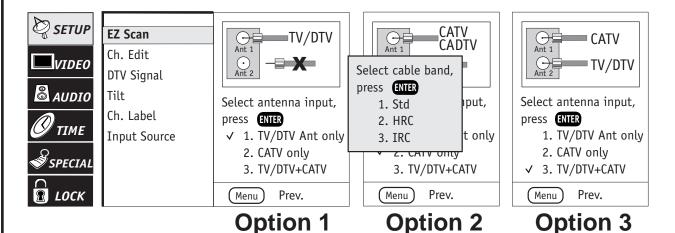
C32V23/C36V23 Front Control Panel



Typical Front Panel Controls Note: Side controls operate the same as the front controls shown above.

EZ Scan (Channel Search)

Use EZ Scan to automatically find active channels and store them in the TV's memory



- Press MENU, (if not selected, use the Up/Down arrow to choose Setup Menu,) then press ENTER or the right arrow button.
- Using the Up or Down arrow on the remote control, select EZ Scan on your screen, then press ENTER or the right arrow button.
- Using the Up or Down arrow, select option 1, 2, or 3. (Based on your connection(s) to Antenna/Cable 1-2.)
- Press ENTER to begin the channel search.

 Note: Allow EZ Scan to complete the channel search cycle for TV, CABLE*, DTV, etc.
- When the channel search is complete, press MENU repeatedly until all menus are removed, or press QUIT.
 - EZ Scan finds active channels being received by the TV tuner.
 - Cable will not work unless you subscribe to a cable service.
 - Run EZ Scan again after any Antenna/Cable connection changes.

Mini glossary

TV The antenna device receiving the program signal sent over-the-air.

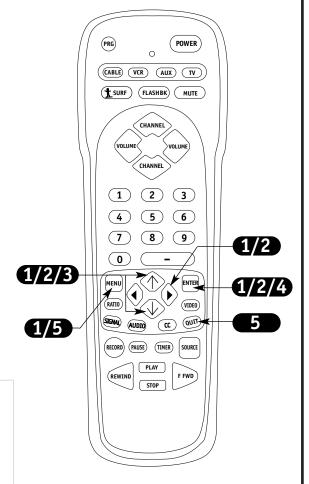
DTV Digital TV programming sent over-the-air.

CATV Your EZ Scan selection, if you subscribe to a cable service.

CADTV Your EZ Scan selection, if you subscribe to a digital cable service.

*Cable Service Band Note: Select Std=Standard, HRC=HRC Band, or IRC=IRC Band.

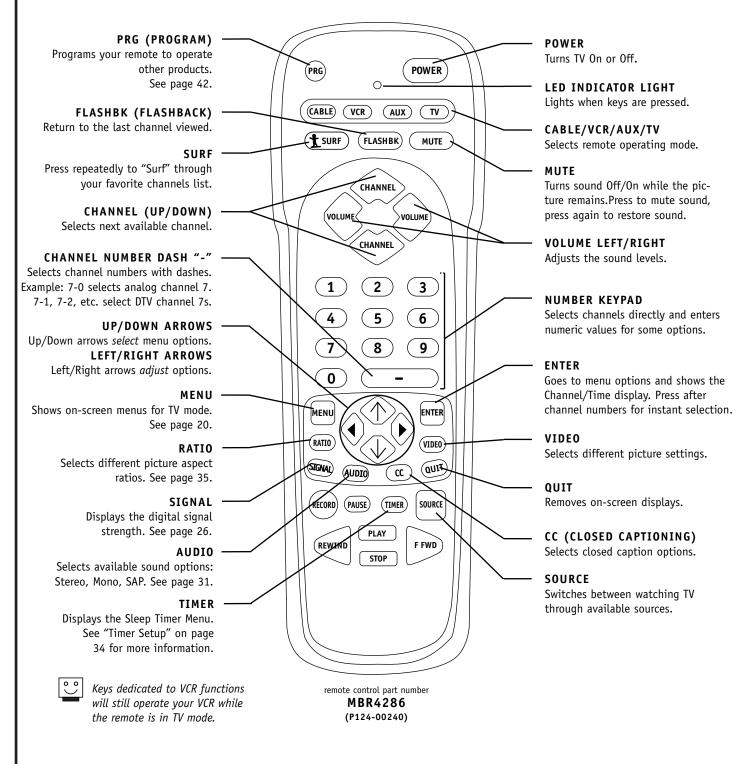
For further band information, contact your cable service provider.



PAGE 18 206-3767

Note: Pressing TV puts remote into TV operating mode

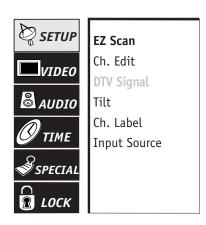
A quick list of the keys on your remote and what they do in TV mode, see page 48 for remote key functions in all programmable modes...



206-3767 PAGE 19

On-Screen Menu Operation

Use the remote to access the on-screen menus



to a gold color SETUP **EZ Picture** Contrast **VIDEO Brightness** 50 S AUDIO Color 50 Tint **Sharpness Color Temp** SPECIAL **Z-View** LOCK

When selected, values change

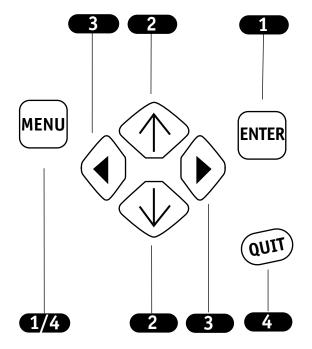
Main TV Features Menu

Video Menu

- Press MENU on the remote control. Use the Up or Down directional arrow to "select" or highlight the name of one of the six main menus on your screen like the VIDEO menu, then press ENTER.
- Use the Up or Down directional arrow to highlight an option like the CONTRAST adjustment bar, then press the Right arrow. You can select other menu options like COLOR TEMP using the UP or DOWN directional arrows.
- Once the option is selected, in this case CONTRAST, use the RIGHT or LEFT directional arrow to adjust the setting; the larger the number the more contrast, the lower the number, the less contrast in the picture. Note: Some menu options use a checkmark to indicate setting, see page 22.
 - You can adjust the other menu options using the above procedure or if you are done adjusting the menu option settings:
 - $\ensuremath{\mathrm{a.\;Press\;MENU}}$ repeatedly to go back to the main menu.
 - b. Press QUIT to remove the menus from the TV screen.

Additional instructions are usually included on the bottom of the menu indicating which remote keys to use to move to the right, move to the left, or return to the previous menu, etc.

Use the number keypad to enter numerical values when required.



Mini glossary

4

MENU On-screen displays used to set up and operate TV features.

ENTER Action key used to make changes on the menus.

UP/DOWN Menu UP or DOWN directional arrows used to "select" or highlight and choose menu options.

LEFT/RIGHT Menu LEFT or RIGHT directional arrows used to "adjust" some menu settings.

QUIT Exits menus and removes on-screen displays.

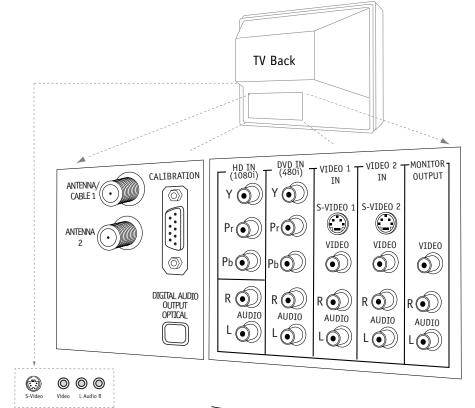
PAGE 20

Input Source Selection Options

Choose the connected

and hear on your TV

source you want to see



Press SOURCE repeatedly to choose from the available input viewing sources.

Analog: Antenna/Cable1 -2 on TV back near Jackpack, Over-the-Air Antenna or Cable service signal source.

Video 1 In: on TV back Jackpack, Set of Composite Audio/Video Input jacks. S-Video Input jack use with Video 1 Audio Input jacks.

Video 2 In: on TV back Jackpack, Set of Composite Audio/Video Input jacks. S-Video Input jack use with Video 2 Audio Input jacks.

F Video In: on TV front Jackpack, Set of Composite Audio/Video Input jacks.

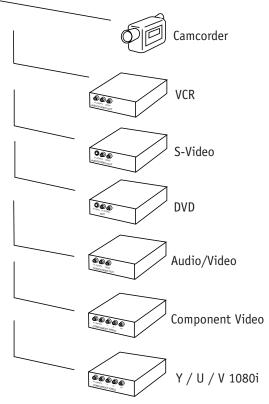
F S-Video In: on TV front Jackpack, S-Video Input jack use with front Audio Input jacks.

DVD IN: on TV back Jackpack, 480i, Set of Component Audio/Video Input jacks.

HD In: on TV back Jackpack, Set of component Audio/Video Input jacks at 1080i.



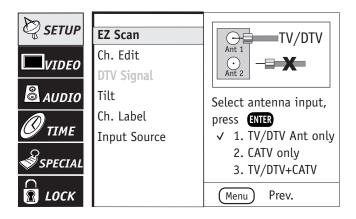
The source equipment you intend to view should be turned on.

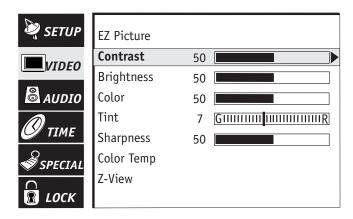


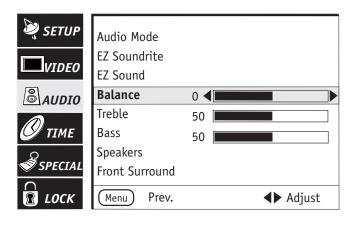
Typical Viewing Sources

Descriptions of the menus and displays

Using MENU, the Up/Down arrows, and the ENTER key and the other keys indicated on the remote, the user can access the menus and displays described below.







ON-SCREEN MENUS

SETUP pages 18/25 - 29 Sets the TV up and adjusts the basic features.

EZ Scan page 18

Automatically finds and stores all available channels in your viewing area; tune in those channels using Channel Up/Down.

Ch. Edit page 25

Choose which channels will appear when using Channel Up/Down. Adds favorite channels to Surf channel list.

DTV Signal page 26

Shows the strength of the DTV signal being received.

Tilt page 27

If needed, adjusts the picture by tilting it to fit screen.

Ch. Label page 28

Choose a network symbol to identify the channel.

Input Source page 29

Chooses the input source for the picture and sound.

VIDEO page 30

Adjusts the picture appearance to your preference. Your options are:

EZ Picture, Contrast, Brightness, Color, Tint, Sharpness, Color Temperature, Z-View.

AUDIO page 31

Customizes the sound to suit your room and taste. Your options are:

Audio Mode, EZ Soundrite, EZ Sound, Balance, Treble, Bass, Speakers, Front Surround.

On-Screen Menus/Displays Overview

TIME pages 32 - 34

Sets the TVs internal clock and TV turn on/off functions.

Clock page **32** Sets the current time on the TV.

Off Timer page 33

Sets the time the TV will turn off automatically each day.

On Timer page 33

Sets the time the TV will turn on automatically each day.

Sleep Timer page 34

Sets a time that the TV will automatically turn itself off, one time.

SPECIAL pages 35 - 38

Goes beyond basics and customizes your TV's features. Your options are:

Aspect Ratio page 35

Chooses the correct picture format for the video source.

Analog Caption page 36

Chooses a captioning or text option.

Language page 37

Chooses the language you want the on-screen menus to appear in: English, Spanish, French.

EZ Demo page 38

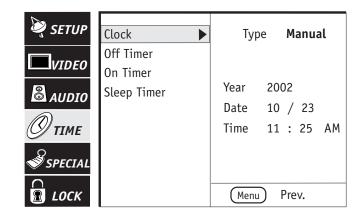
On/Off. Demonstrates the on-screen menus that control the TV's setup and operational features.

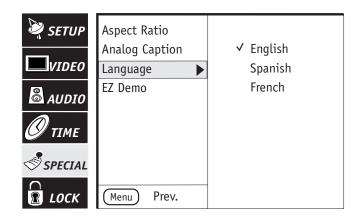
LOCK SYSTEM pages 39 - 40 - 41

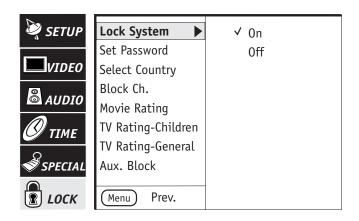
Allows parents to block programming based on the program's content rating, A/V source, or block channel(s).

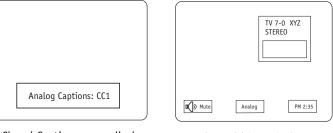
OTHER ON-SCREEN DISPLAYS (See pages indicated.)

Mute 24
Volume Display 24
Channel/Time 23
Sleep Timer 24
Captions/Text 23









Closed Captions menu display

Channel/Time Display

Other Functions & On-Screen Displays

On-screen displays reveal the current status of your Entertainment Machine

Mute Display

Press MUTE to remove the sound.
Press MUTE again to restore the sound.



Yolume Display

Press the VOLUME +/- key on the remote control to see the sound level status display.



Channel/Time Display

Press ENTER on the remote control to view the Channel/Time/incoming audio signal, and channel label display.



Remove On-Screen Displays and Menus Instantly

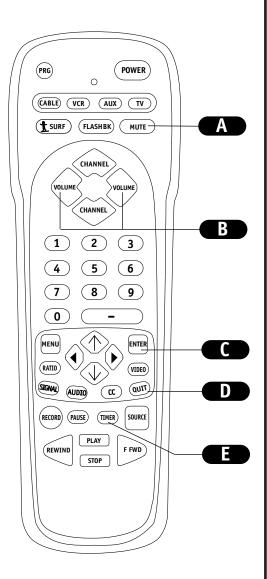
Press QUIT to remove displays and menus and return to TV viewing, or wait a few moments and the displays and menus will automatically disappear from the screen.

Sleep Timer Display

Sleep Timer Status Display.

Sleep Time: Off

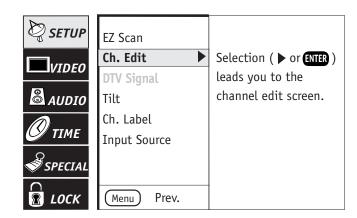




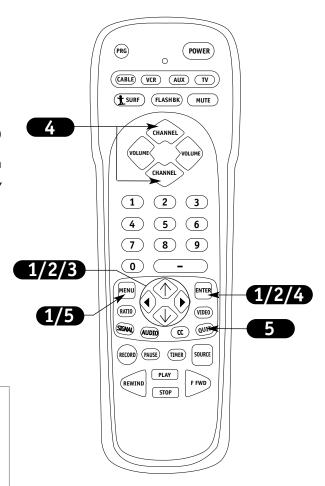
PAGE 24

Channel Edit Add/Delete/Surf Setup

Customize your channel selection list: Add Channels, Delete channels you don't watch, Create a favorite channels list to "Surf" - press SURF repeatedly to scroll your Surf channels



- Press MENU, use the Up/Down arrow to select the SETUP menu, then press ENTER or the right arrow.
- Use the Up/Down arrow to highlight the Ch. Edit option, then press ENTER or the right arrow.
- Use the Up/Down/Left/Right arrows to highlight and select a channel. (Use Channel Up/Down to show next channel group.)
- Press ENTER repeatedly to ADD to or, DELETE the channel from the channel scan. To add the selected channel to the Surf list, press SURF. To go to the next group of channels use CHANNEL Page Up/Page Down.
- Use MENU to go back to the SETUP menu. Press QUIT to remove menu when finished or go to another channel to edit and repeat from Step 3.
 - If you've deleted a channel, it isn't gone for good. Just select it using the NUMBER keypad on the remote, or add it later.



Mini glossary

SURF

ADD Include a new channel to the channel list that you scroll through using Channel Up/Down.

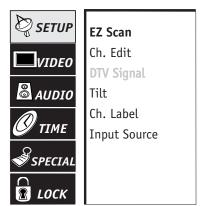
DELETE Remove a channel that you don't watch from the channel list that you scroll through using Channel Up/Down.

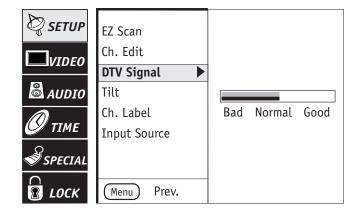
Adds a favorite channel to the Surf channel list. Press SURF repeatedly, channels you specified as Surf channels will be the only ones to appear. Use Channel Up/Down to return to and scroll the normal channels list.

206-3767 PAGE 25

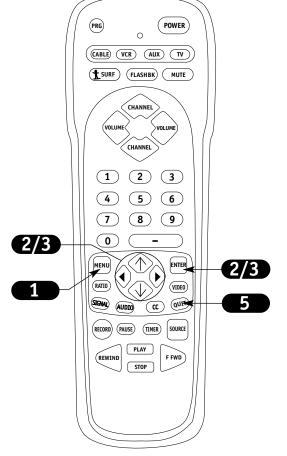
DTV Input Signal Menu

Go to the DTV Signal option to see the strength of the DTV signal being received





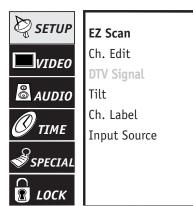
- 1 Press MENU to show the menus on-screen.
- Use the Up/Down arrow to select the SETUP MENU, then press ENTER.
- Use the Up/Down arrow to select the **DTV Signal** option. (Use MENU to go backward as needed.)
- View the on-screen signal strength monitor to see the quality of the signal being received.
- **5** Press QUIT to remove menus and return to TV viewing.
 - DTV Signal option is only accessible on the Setup menu if the source is DTV.
 - Press SIGNAL on the remote control to show signal strength.

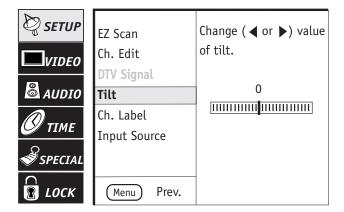


PAGE 26 206-3767

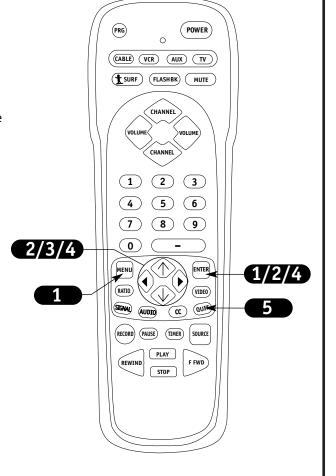
Tilt Menu

Use the Tilt option to correct the picture angle, if necessary



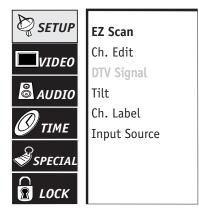


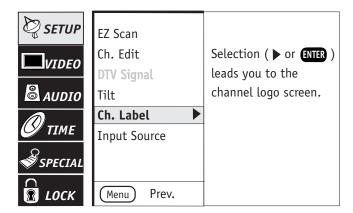
- 1 Press MENU to show the menus on-screen.
- Use the Up/Down arrow to select the SETUP MENU, then press ENTER or the right arrow button.
- 3 Use the Up/Down arrow to select the **Tilt** option.
- Use the Left/Right arrow to adjust the **Tilt** of the picture image to your preference.
- **5** Press QUIT to remove menus and return to TV viewing.
 - The tilt angle you set will be retained in the TV's memory. When the TV is turned on, the tilt angle last set will be used.



Channel Label Menu

Label the channels with their logos for easier identification when tuning



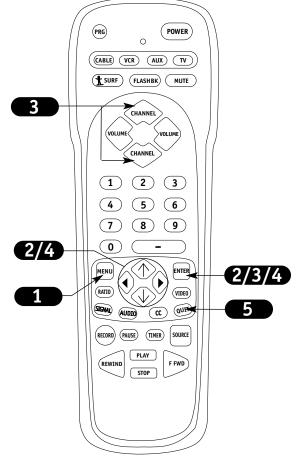


- Press MENU, use the Up/Down arrow to select the SETUP menu, then press the right arrow or ENTER.
- Use the Up/Down arrow to select the Ch. Label option on your screen, then press the right arrow or ENTER.
- Tune to the channel you want to label with a logo, using the Channel Up/Down arrows.
- Use the Up/Down/Left/Right arrows to select a logo for the channel, then press ENTER. The logo appears above the channel picture on the menu.
- Tune to another channel to continue labeling or press QUIT to remove menu and to return to TV viewing.



When you press ENTER, the label you have chosen will appear in the channel/time display.

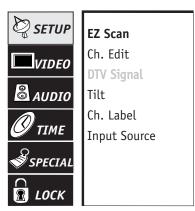
When you scroll through the channels, any label set for a channel will appear in the channel/time display.

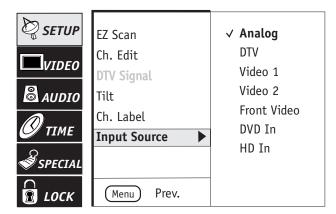


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Selecting Input Sources

Choose the picture and sound you want to see and hear for the main screen





Using SOURCE to Choose Viewing Sources

Press SOURCE repeatedly to scroll through the available sources: Analog, DTV, Video 1, Video 2, F Video, DVD, and HD.

Selecting Input Source using the Setup Menu
Press MENU to show the menus on-screen.

Use the Up/Down arrow to select the SETUP MENU option, then press ENTER.

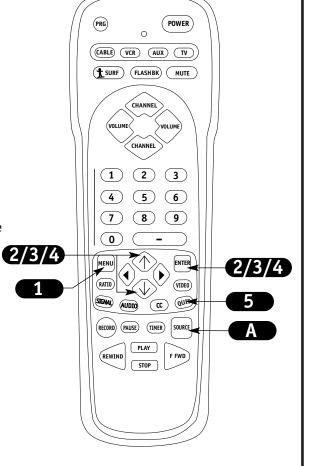
Use the Up/Down arrow to select the Input Source option, then press ENTER. (Use MENU to go backward as needed.)

Use the Up/Down arrow to move the checkmark and select Analog, or one of the other available sources.

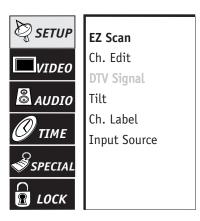
After you have selected a viewing source, press QUIT to remove the menu and return to TV viewing.

If S-Video sources are connected, they will appear on the Source menu as Video 1, 2 etc.

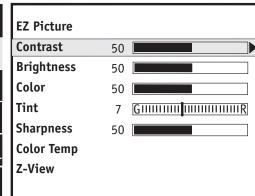
Be sure to use the Video menu to change the Aspect Ratio as needed when using sources which have different picture proportions for the main screen.



Use the Video menu to customize the picture appearance





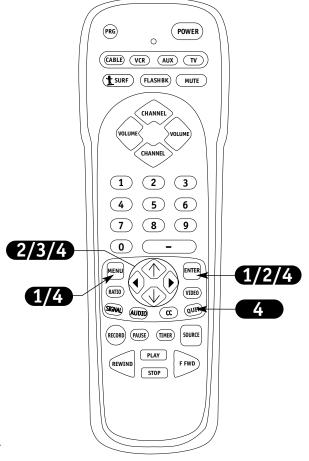


- Press MENU, use the Up/Down arrow to select the Video menu, then press ENTER or the Right arrow.
- Using the Up/Down arrow on the remote control, choose Contrast (or another menu option on your screen), then press the Right arrow twice.
- Using the Left/Right arrow, change the Contrast level to your preference. Use the Up/Down arrow to select other adjustment bars like Brightness, Color, Tint, and Sharpness.
 - Press QUIT, to return to TV viewing, or press MENU and repeat from step two to set the other menu options. Your options are:
 - **EZ Picture**: Choose either Custom, Normal, Digital Preset, Night Time, Movie, Weak Signal, Video Game, or Sports. Custom: Allows you to adjust the picture the way you want. Normal: Resets all the options to their preset values. Other options adjust the picture to the source's image.
 - **Contrast**: Adjusts the level of difference between white and black in the TV picture. The more contrast, the brighter the picture appears.
 - **Brightness:** Increases or decreases amount of white in the TV picture.
 - **Color**: Adjusts levels of all colors in the TV picture.
 - **Tint:** Adjusts the relative amounts of red and green colors in your picture.
 - **Sharpness:** Raises or lowers the definition of the picture. The lower the level, the softer the image will appear.
 - **Color Temp:** Adjusts levels of all colors in the TV picture; Cool or Warm.
 - **Z-View:** On, automatically adjusts the picture display for optimum quality: on or off.

 $^{\circ}$

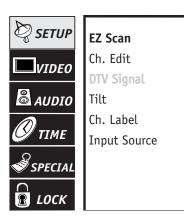
4

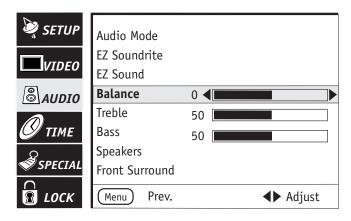
Choose the NORMAL option in EZ Picture to quickly reset the Video Menu options to their original pre-set values, or use your own settings with CUSTOM.



Audio Menu

Adjust the sound to your preference and set up the audio features





- Press MENU, use the Up/Down arrow to select the Audio menu, then press ENTER or the Right arrow button.
- Using the Up/Down arrow on the remote control, highlight the audio option you want to adjust, then press the Right arrow.
- Using the Left/Right arrow, change the Audio option level to your preference.
 - Press QUIT, to return to TV viewing, or press MENU and repeat from step two to set the other menu options. Your options are:
 - Audio Mode: Choose from Stereo sound, Mono sound, or 2nd Audio/SAP.
 - EZ SoundRite: Turns the uniform volume level on or off.
 - **EZ Sound**: Use one of the five factory audio presets: Normal, Stadium, News, Music, Theater, or your own "Custom" settings.
 - **Balance**: Allows you to put the sound more to the left or right channel.
 - Treble: Increases/decreases higher-end sounds.
 - Bass: Increases/decreases lower-end sounds.
 - Speakers: Turns the TV speakers on or off.
 - Front Surround: Turns front surround sound on or off.



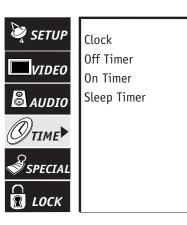
4

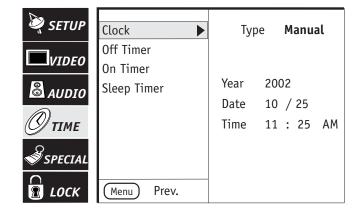
Not all programming is broadcast in stereo sound or has 2nd Audio SAP.

Mini glossary	
STEREO SOUND	Stereo (stereophonic) sound refers to audio that's divided into right and left sides.
MONO SOUND	Mono (monaural) sound is one channel of sound. For more than one speaker, all the speakers play the same audio.
2nd Audio/SAP	Second audio program provided by some broadcasters; usually a different language.
Front Surround	Front Surround is a stereo effect.

POWER (CABLE) (VCR) (AUX) (TV) SURF FLASHBK MUTE CHANNEL **(5) (6) 8 9** 0 1/2/3 1/2/3 (RATIO) (VIDEO) 1/4 QUF (m) (TIMER) SOURCE F FWD STOP

Set the clock yourself or have the TV do it for you





- In the Time menu with the Clock option highlighted, press ENTER or the right arrow to go to the Clock Menu.
- Use the Left/Right arrows to move through the menu and the Up/Down arrows to set the clock as indicated on the menu.

Clock Menu Options

Manual Mode

User sets the Clock options.

- Year: Set the current year.
- Date: Set the Month and Date.
- Time: Set the Hours, Minutes, and AM or PM.

Auto Mode

TV sets the clock, but the user can enter the menu and set the appropriate info:

- PBS Channel: Set the channel number of your PBS station to receive time from PBS signal.
- Time Zone: Set your time zone: Auto, Eastern, Central, Mountain, Pacific., Alaska, Hawaii, New F land, Atlantic.
- Daylight Savings: Turn Off or On.

Press QUIT to return to TV viewing, or press MENU to return to the previous menu.





The On/Off timers will not work until the Clock on your television has been set.



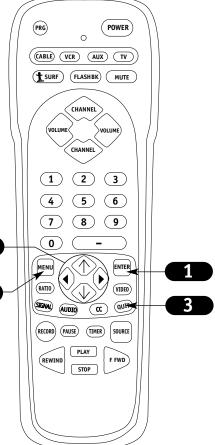
You need to set the current time manually the first time the TV is connected to power. This will activate the clock.

Mini glossary

TIME A four-number figure broken down into hours and minutes; first two numbers are hours, last two numbers are minutes.

HOURS First two numbers entered when setting the clock.

MINUTES Second two numbers entered when setting the clock.

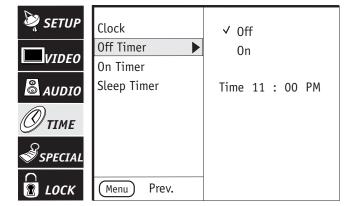


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On/Off Timer Menus

Use the On/Off Timers to turn the TV on and off each day at the on and off specified times



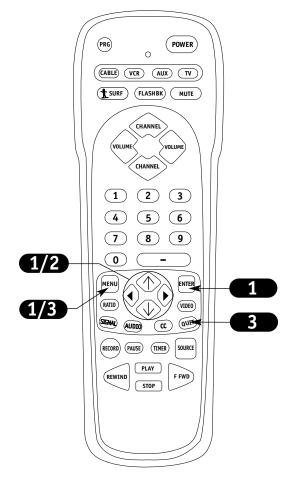


Setting the TV Turn Off Time

- With the Time menu selected, use the Up/Down arrows to choose the Off Timer option, then press ENTER or the Right arrow button.
- Use the Left/Right arrows to move through the menu and the Up/Down arrows to set the Off Timer options, as indicated on the menu.

Setting the TV Turn On Time

- 1 With the Time menu selected, use the Up/Down arrows to choose the On Timer option, then press ENTER or the Right arrow button.
- Use the Left/Right arrows to move through the menu and the Up/Down arrows to set the On Timer options, as indicated on the menu. Set the TV turn on time, channel, and volume level.
- Press QUIT to return to TV viewing, or press MENU to return to the previous menu.

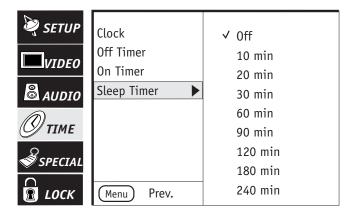


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Sleep Timer Menu

Set the Sleep Timer to automatically turn the TV off, after the preset time has expired





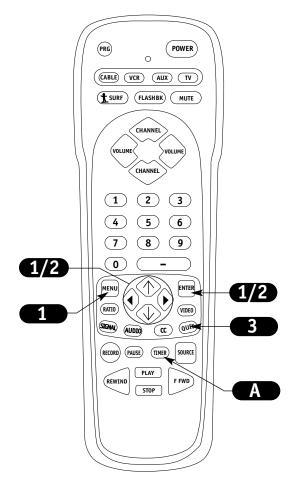
Sleep Timer

Use the TIMER button to choose a preset time from 10 minutes to 4 hours for the TV to automatically turn itself off.

Using the Sleep Timer Menu

Selecting Sleep Timer Menu

- With the Time menu selected, use the Up/Down arrows to choose the Sleep Timer option, then press ENTER or the right arrow button.
- Use the Up/Down arrows to select a preset TV turn-off time from the preset options listed, press ENTER.
- Press QUIT to remove the menu and return to TV viewing.



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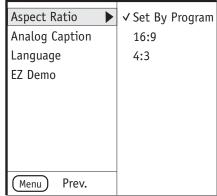
Aspect Ratio Menu

Change the picture aspect ratio to the format required by the selected source



EZ Scan
Ch. Edit
DTV Signal
Tilt
Ch. Label
Input Source





Direct Entry Method: RATIO Key

Press RATIO repeatedly to select available aspect ratios for viewing source.

- Using the Special Menu Option Method
 With the Special menu selected, press ENTER or the Right arrow button.
- Use the Up/Down arrow to select the Aspect Ratio option, then press ENTER or the Right arrow button.
- Using the Up/Down arrow, choose the correct Aspect Ratio on the menu, then press ENTER.
 Your options are:
 - **Set By Program**: Selects the proper picture proportion to match the source's image; 16:9, 4:3.
 - **16:9**: Selects the proper picture proportion to match the 16:9 source's image.
 - **4:3**: Selects the proper picture proportion to match the 4:3 source's image.
- Press QUIT, to return to TV viewing.

If the Aspect Ratio option is not selectable on the menu, then the picture source is correct and no other options are available.

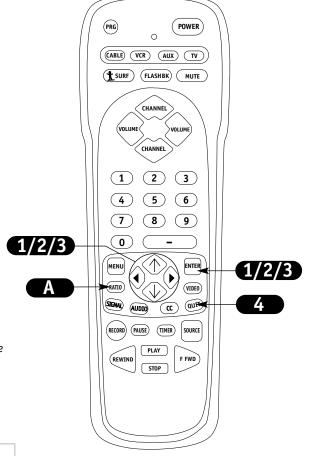
For Model No. C34W23, Aspect Ratio will be Normal, Wide, or Zoom. As a result. Set by Program, 16:9, and 4:3 are not available.

result, Set by Program, 16:9, and 4:3 are not available.

Mini glossary

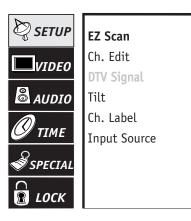
4:3 Standard 4 x 3 almost square-like picture proportion used for most TV formats.

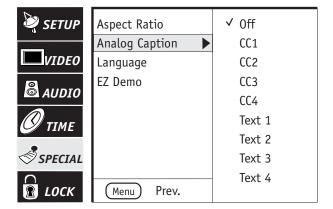
16:9 Wider than normal picture format used for HD sources that produce more movie theater-like images.



Analog Caption Menu

Choose a Closed Captions or Text option or turn the feature off





Analog Caption (Caption/Text) allows your TV to receive various closed caption and text options if provided by broadcasters.

Availability and functionality of Caption/Text is determined only by the broadcaster and may not be available on a given program. Standard captions are usually on Caption1, standard text is usually on Text 1.

- Press MENU, use the Up/Down arrow to select the Special menu, then press ENTER or the Right arrow button.
- Use the Up/Down arrow to choose Analog Caption, then press ENTER or the Right arrow button.
- Use the Up/Down arrow to select an option from the Analog Caption menu (Caption/Text):

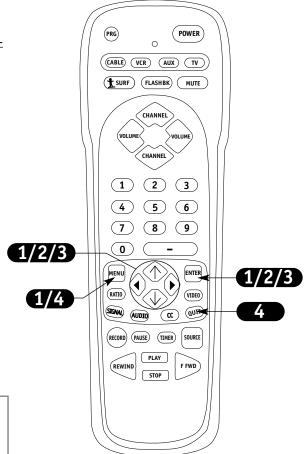
 Off, Caption 1, Caption 2, Caption 3, Caption 4, Text 1, Text 2, Text 3, or Text 4; so that the option will appear when the TV is tuned to a program that has Closed Captions or Text.
- 4. Press QUIT to remove menu and return to TV viewing.
 - Standard closed captioning is available using the Caption 1 option.
 - Not all programming has closed captioning or text available; even though Captions 1, 2, 3, 4, and Text 1, 2, 3, 4 are available to broadcasters.

Mini glossary

TEXT

CAPTIONS The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.

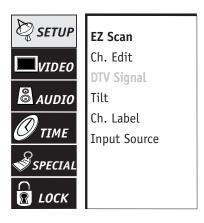
The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

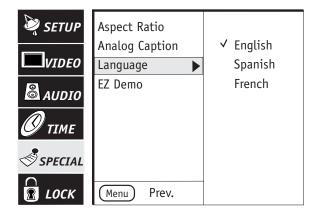


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Language Menu

Choose the language you want the onscreen menus to appear in



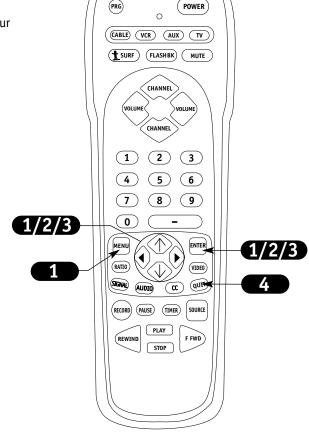


Press MENU, use the Up/Down arrow to select the Special menu, then press ENTER or the Right arrow button.

Use the Up/Down arrow to select the Menu Language option on your screen, then press ENTER or the Right arrow button.

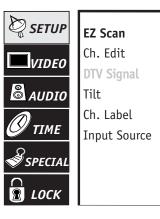
Use the Up/Down arrow to choose any of the following options: English, Spanish, or French, then press ENTER.

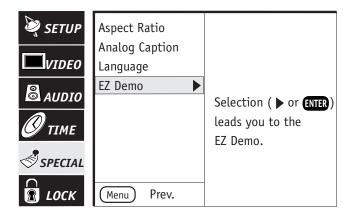
Press QUIT to remove menu and to return to TV viewing.



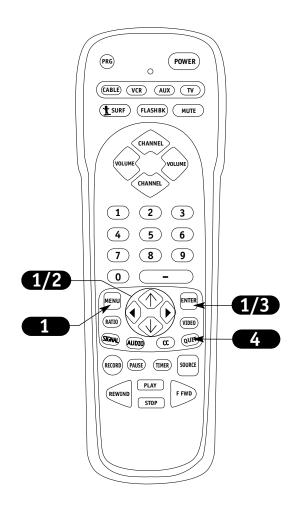
EZ Demo Menu

Your TV can display the menus available





- Press MENU and use Up/Down arrow to select the SPECIAL menu, then press ENTER or the Right arrow button.
- 2 Use the Up/Down arrow to select the EZ DEMO option.
- When you press ENTER or the Right arrow button, EZ Demowill start and continue to run.
- Press QUIT to stop EZ Demo, remove menu and return to TV viewing.



Mini glossary

EZ DEMO

Feature provides an automatic demonstration of the on-screen menus available on your TV.

View and learn what features are available to you as EZ Demo cycles through the on-screen menus.

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If used, this optional feature can "block" undesirable programming from appearing on the TV. Note: Lock, is also known and referred to in the text as Parental Control. To block specific source inputs, use the AUX. Block options. Lock options are available by country: USA and Canada. Lock options are also available with TV Ratings for English and TV Ratings for French. Block individual channels if desired.

Lock/Parental Control offers the user a wide variety of options and settings that restrict or "block" the programming that can appear on the TV. Parental control allows the user the capability of defining which program rating they consider acceptable, to the younger or more sensitive viewer. It can be preset and turned either on or off by the user who specifies the secret 4-number code, the password. General audience and children viewer blocks should both be programmed into the TV's memory. Viewer ratings are specified for both TV and the motion picture industry; both rating systems should be used, for complete coverage. The ratings are based mainly on children's ages.

Overview

To insure complete coverage for all TV programs, (movies and regular TV shows) choose a rating for MPAA, from the selections AND choose ratings from the TV Parental Guidelines Rating System, using the Age Block option for General Audiences, and for Children. In addition to those, you may wish to add additional restrictions from viewing certain channels. See the Lock menu, and submenus example on the following pages.

Things to Consider before Setting Up Lock (Parental Control)

- Determine which rating you consider acceptable to the viewer. (For example, if you choose TV-PG, all more restrictive ratings will be automatically blocked; the viewer will not be able to see: TV-PG, TV-14, or TV-MA rated programming.)
- Do you want to block the auxiliary video sources? (Blocks the signal sent by the equipment, such as a VCR, connected to the TV Audio/Video input jacks; in the Aux. Block option.) Or leave unblocked, but choose allowable ratings.
- In the TV Rating-General option, block program "Content" based on individual parameters such as: Age, Dialog, Language, Sex, Violence, or in the TV Rating-Children option: Fantasy Violence.
- Select a secret password; in the Set Password option. Use the number keys on the remote. Don't forget the password, it is the only way you can access the Lock menu and change rating selections, or turn Lock off.
- Do you want Lock to be active all the time? If not, you can turn it on or off; with the Lock On/Off option.



You can set different Parental Control viewing restrictions for general audiences and for children - - both can be active at the same time.



Even if you choose to leave the Aux source inputs unblocked, the ratings you specify will automatically restrict the programming that appears from the video sources.

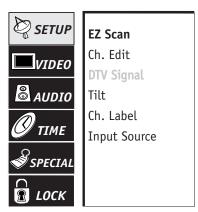


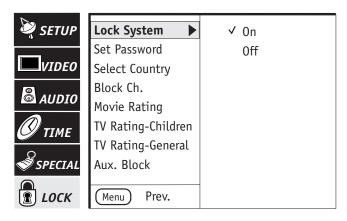
Simply specifying one content block such as Sex, will not automatically block another content in the programs from appearing.



You cannot disable Lock by disconnecting the TV from power. Lock will automatically reset if power is disconnected.

After you have read the preceding page, follow instructions below to set up and activate Lock





Lock Menu Typical Setup Requirements

As shown above, with the Lock System turned on:

- Set the initial 4-digit password "0-0-0-0" with the number keypad. After setting the password and confirming it, use the Up/Down arrow to highlight an option like TV Rating-General, then press ENTER or the Right arrow.

Navigating Within the Lock Menu

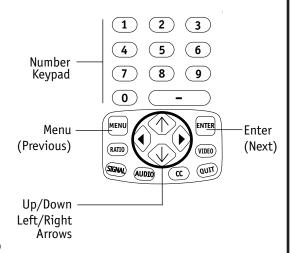
Use the Up/Down/Left/Right arrows to select and adjust or set the rating for an option. For "Language" for example, use the "TV-PG" setting. (See the Mini Glossary, Ratings Charts on this and the next page for rating definitions.) Use MENU to return to the previous menu.

Activating Your Blocking Scheme

discretion is advised.

After you have selected and adjusted the Lock menu options to your preference:

- Set the Lock System option to either On or Off.

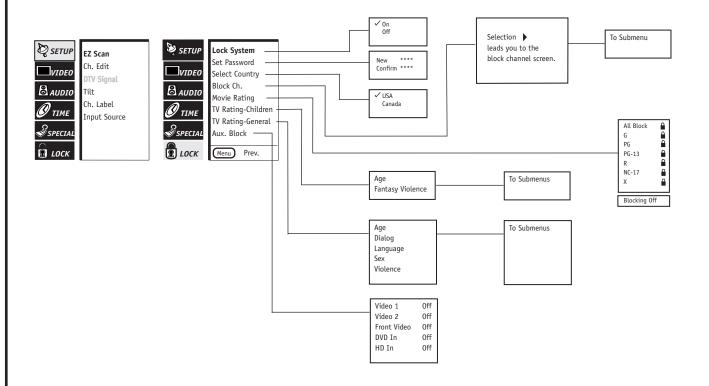


Mini gl	_	TON PICTURE ASSOCIATION OF AMERICA (MPAA) RATING SYSTEM
G	General Audiences	Content not offensive to most viewers.
PG	Parental Guidance Suggested	Content is such that parents may not want their children to view the program.
PG-13	Parental Guidance Suggested	Program is inappropriate for preteens, with a greater degree of offensive material than a PG rated program.
R	Restricted viewing	Not for children under age 17. Strong elements of sex and/or violence.
NC-17	Restricted Viewing	Not for children under age 17 under any circumstances. Strong sexual content.
Χ	Hard Core Films	Same as NC-17 rating.

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Lock System Menu Structure

Lock System menus with various restriction options are shown below



Mini gl	ossary	TV DADENTAL CUIDELINE DATING CYCTEM
		TV PARENTAL GUIDELINE RATING SYSTEM
TV-G	General Audience	Considered suitable for all audiences; children may watch unattended.
TV-PG	Parental Guidance Suggested	Unsuitable for younger children, may contain: Suggestive Dialog, Bad Language, Sex, and Violence Scenes.
TV-14	Parents Strongly Cautioned	Unsuitable for children under 14, may contain: Strong Dialog, Bad Language, Sex, and Violence Scenes.
TV-MA	Mature Audience Only	Adults only, may contain: Strong Dialog, Bad Language, Sex, and Violence Scenes.
CHILDR	EN'S CLASSIFICATIONS	
TV-Y	Children	Considered suitable for all children under 7 years old.
TV-Y7	Children 7 and over	Considered suitable for children over 7, may contain Fantasy Violence Scenes.

²⁰⁶⁻³⁷⁶⁷ PAGE 41

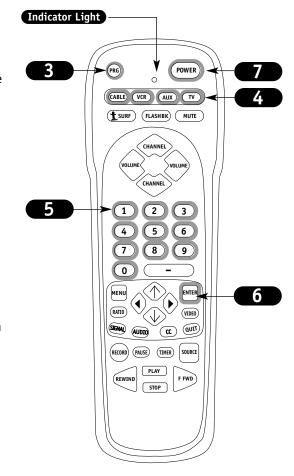
Programming the Remote

Set up your remote to operate other brand name devices

- Turn on the device you want to program.
- On the chart on page 46/47, find the type of device you're programming, and then find the brand name. Write down the three-number code(s).
- Press and hold PRG. It's recessed so it doesn't get pushed accidentally. Use a small, blunt object. When the indicator light turns on, you can release PRG.
- Push the button name with the type of device you're programming: VCR, CABLE, AUX, TV.
- Using the NUMBER keypad, enter the three-number code you found on page 46/47.
- Press ENTER to save the code. (The indicator light will flash 2 times, then turn off to indicate the code is valid.)
- Point the remote at the device and push POWER. It should turn off. If not, try the other codes listed and continue from step three.

Note: To reset remote to factory settings, enter 9-1-1, in Step 5.

- Programming your Zenith remote may allow you to use one remote to operate up to 4 different devices, if all modes are programmed.
 - Once the device turns off, try the other functions. IF they do not operate, try another code. Or, see page 45.
 - Not all devices will operate with your Zenith remote control.



	Mod	le / Pr	oduct Compatibili	ty
L	TV	VCR	CATV	AUX
	TVs		Cable Boxes, Satellite Receivers	All products on pp 46 - 47

Mini glossary

PROGRAMMING Procedure to set up remote to operate other equipment.

PRG Programming mode button.

DEVICE Infra-red remote controllable electronic accessory devices.

PAGE 42

Mode Sound Switch Setup

This feature is typically used to set up the remote to control the sound from an external audio system, or cable box, without changing modes

Note: Check to make sure the remote operates the device you want to hear. If
not, see the remote programming page.

POWER

CABLE VCR AUX TV

SURF FLASHBK MUTE

1 2 3

(4) (5) (6)

0

8 9

CC QUIT

2/4

Indicator Light

- With a small blunt object, press and hold PRG until the LED indicator light turns on (about 3 seconds), then release PRG.
- Press the mode button of the device you want to hear: CABLE, VCR, AUX, TV.
- 3 Press the Vol+ button, the LED will blink.
- Press the button of the mode you want the volume to be controlled by: CABLE, VCR, AUX, TV.
- Press ENTER to save the code (The indicator light will flash 2 times and then turn off).

For example: If you want the VCR mode to control the volume of the AUX mode (audio system), press VCR in Step 2 and press AUX in Step 4. Then, when you press volume in VCR mode, the device programmed for the AUX mode will respond.

Default I	Mode Volu	ıme Control Setups
Mode	Sound c	ontrolling mode
TV	TV	(Controls TV volume.)
VCR	TV	(Controls TV volume.)
AUX	AUX	(Controls AUX Volume.)
CABLE	CABLE	(Controls Cable Volume.)



If you can't find the code for your amplifier, use the Auto Search feature described on page 45.

Mini glossary

AMPLIFIER Audio device which sends sound to speakers, like an Audio Tuner, Receiver, or Amplifier.

See Audio Tuners/Amp list on page 47.

CABLE BOX VOLUME Some cable boxes have volume controls.

AUX Auxiliary equipment.

Verify 3-Digit Code Stored in Mode

Use the following method described below to find the code number stored in memory for each remote operating mode: TV, VCR, CABLE, and AUX

- With a small blunt object, press and hold PRG for about three seconds. When the light turns on, release PRG.
- Press the mode button you want the 3-number code for, then press the TIMER button.

The LED will blink the number of times to indicate the number of the first digit. There will be a 1 second pause during which the LED light will be off, then the LED will blink the number of times for the second digit of the code, and so on. For example:

- One blink, no LED light for 1 second.
- Three blinks, no LED light for 1 second.
- Eight blinks.

This is the example for code: 1-3-8.

Note: Ten blinks indicate code number "0".

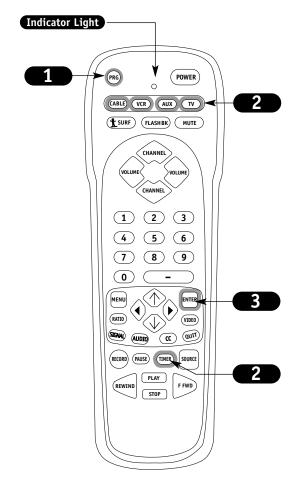


Programming your Zenith remote may allow you to use one remote to work up to 4 different devices, if all modes are programmed.



Not all devices will work with your Zenith remote control.

Mode / Product Compatibility	y
TV VCR CATV	AUX
TVs VCRs Cable Boxes, DVDs Satellite Receivers	All products on pp 46 - 47



Mini glossary

PROGRAMMING Procedure to set up remote to operate other equipment.

PRG Programming mode key.

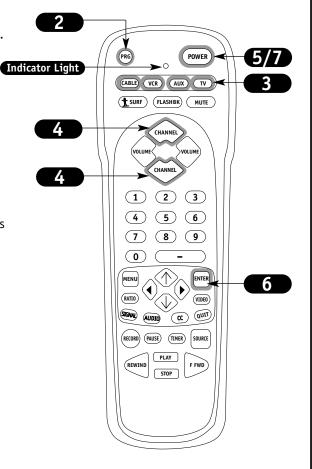
DEVICE CODE Code to control infra-red remote controllable electronic devices: TVs, VCRs, Cable Boxes, etc.

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Brand Code Auto Search

Use Auto Search to try all available brand codes to determine if your multi-brand remote control can operate the device

- 1 Turn on the device you want to program the remote to operate.
- With a small blunt object, press and hold PRG until the indicator light turns on (about 3 seconds), then release PRG.
- Press the button for the device you are trying to program: CABLE, VCR, AUX, or TV.
- Press and hold the CH+ or CH- button. When the device turns off, release the CH+ or Ch- button. (During this procedure the remote sends out a series of power on/off codes.)
- To check the code, aim the remote at the device and press the POWER button to turn the device on and off. Try other buttons on the remote to operate other functions to determine if they are also functional.
- Push ENTER to save the code (The indicator light will flash 2 times and then turn off).
- Press POWER to turn the device back on.
 - You can quickly get out of Auto Search by pressing PRG or not pressing any button for 20 seconds.
 - The Zenith remote may not be able to operate the device. If so, use the device's original remote control.



Mini glossary

Auto Search Another way of finding a brand code for controlling auxiliary equipment such as a VCR, DVD player, etc. that is not available through the regular remote brand code programming method.

		•	•	
Pron	ramm	าทก	Cod	ΔC
	K • 1 1 1 1 1 1		CUU	

Other Manufacturers Brand Names and Programming Codes

TVS	4	4								091 160		NAD NEC		025 007	016	019	024	SIEMENS	029 088	081	143	170	175
A MARK ADMIRAL	112 072		161				165							056	130	132	134	SIGNATURE	072				
AKAI	006		101			GOLDSTAR				110		NIKEI	043					SONY				085	126
AMPRO	073						113		119	122	12/	ONKING ONWA	043 043					SOUNDESIGN			185 028	043	114
AMSTRAD	052					HALL MARK	004					OPTONICA		081				SPECTRICON	112	004	J20	043	11(
ANAM				080		HITACHI			009	010	011	PADIO SHACK		551				SSS		043			
		112	115	118	121		012	023	041	075		PANASONIC			080			SUPRE MACY	002				
A0C	131 004	006	በፍጶ	112		TAIFTAITTY		163	166			PHILCO			006			SYLVANIA				044	
BLAUPUNKT	088	000	036	112		INFINITY	164								060	063	064					116	12
CANDLE		003	004	006	i	INKEL JBL	129 164					PHILIPS		143	005	006	038	TANDY	081	100	164		
CAPEHART	058					JCPENNY		006	008	009	024	11111113			093			TATUNG		062			
CETRONIC	043									143			164					TECHNICS			084		
CITIZEN	002 101			006	043		160					PIONEER			023	025	027	TECHWOOD	004				
CLASSIC	043	103	143			JENSEN	013	000	070	000	4.15	DODTI AND		135	176			TEKNIKA				006	
CONCERTO	004					JVC KEC	034	038	070	083	145	PORTLAND PROSCAN		143	161	165	167				143	072	0//
CONTEC	039	043	050	051		KENWOOD	006	070				PROTON			116			TELEFUNKEN				087	
CORONADO	143					KLOSS	002							173			1.5	TELERENT	072	0.0	000	007	
CRAIG	043					KMC	143					QUASAR		056				TERA	172				
CROWN CURTIS	043	143				KTV		043	143	154		RADIO SHACK		043	047	116	127	TMK		116			
MATHES	004	006	101	116	143	LG LODGENET	255					RCA	143	006	ດວວ	02/	056	TOSHIBA			030 138	040	051
CXC	043	•			-	LODGENET	072 072					NUM			023 144			TOTEVISION	143	101	138		
DAEW00				043		LUXMAN	004							161				UNIVERSAL		009			
				103		LXI		015	052	081	160	REALISTIC			043	047		VIDEO					
	111 125						164					ROCTEC	186					CONCEPTS	146				
DAYTRON	004			130	143	MAGNAVOX				022		RUNCO		169	OEO	116		VIDIKRON	174	116			
DYNASTY	043		1.5					160		064	127	SAMPO SAMSUNG			058 089		105	VIDTECH WARDS		116		019	028
DYNATECH	062					MARANTZ		077				SAMSUNU			127			MANDS				019	
ELECTROHOME						MATSUI	164							160			•					164	
EMERSON				028		MEMOREX		007	072	116		SANY0			021		039	YAMAHA	004	006			
	047 116			051 153		METZ	088	00-	٠	00-	0.42	CCOTT			082		44.5	YORK		116			
	155	173	1)1	100	137	MGA		006 077		028	042	SCOTT	004 143	028	043	048	116	YUPITERU ZENITH	043	072	072	095	103
ISHER	007	057				MINERVA	088	011	110			SEARS		007	015	028	030	ZEMIIII	157	0/2	0/3	093	103
	000	043				MITSUBISHI		006	02/	U28	040				094			ZONDA					
UNAI		0.5				HITIOODISHI	004	000	024	020			057	002				LONDIN	112				
UTURETECH	043		UUO	იიი	U3%		042	109	116	124			143	160				LONDA	112				
			008	009	034	MTC	042		116	124		SHARP	143	160	019			2010/1	112				
FUTURETECH GE	043		800	009	034		042 004	109 006	116 062	124		SHARP	143 004	160 014		022	028	ZONON		081	101		
VCRs	043 004		800	009	034	МТС	042 004 DON (004	109 006 012 (018	116 062 045 026	124	146	NEC NORDMENDE	143 004	160 014	019	022	028	SHARP	073	081 054			
TUTURETECH GE VCRS AIWA	043 004 034	006				MTC HARMAN KAR HITACHI	042 004 DON (004 063	109 006 012 (018 137	116 062 045 026 150	124 101	146	NEC NORDMENDE OPTONICA	143 004 012 043 053	160 014 023 054	019	022	028	SHARP SHINTOM	073 031 024	054	149		
VCRs	043 004 034 016	006				MTC HARMAN KAR HITACHI INSTANT REPI	042 004 DON 0 004 063 AY 03	109 006 012 018 137 31 03	116 062 045 026 150	124 101	146	NEC NORDMENDE	143 004 012 043 053 066	160 014 023 054 070	019	022	028	SHARP	073 031 024 003	054 009	149 031	052	
TUTURETECH GE VCRS AIWA	043 004 034	006				MTC HARMAN KAR HITACHI INSTANT REPI JCL	042 004 DON 0 004 063 AY 03	109 006 012 (018 137 31 03 033	116 062 045 026 150	124 101 034	043	NEC NORDMENDE OPTONICA PANASONIC	012 043 053 066 140	160 014 023 054 070 145	019 039 074	022 043 083	028 048 133	SHARP SHINTOM	073 031 024 003 057	054 009	149 031	052 077	
VCRs AKAI	043 004 034 016 146	006	046			MTC HARMAN KAR HITACHI INSTANT REPI	042 004 DON 0 004 063 AY 03 031 012	109 006 012 (018 137 31 03 033 013	116 062 045 026 150	124 101	043	NEC NORDMENDE OPTONICA PANASONIC PENTAX	012 043 053 066 140 013	160 014 023 054 070 145 020	019 039 074 031	022 043 083	028 048 133	SHARP SHINTOM SONY	073 031 024 003 057 149	054 009	149 031		
VCRs AIWA AIKAI AMPRO ANAM AUDIO	043 004 034 016 146 072 031	006 043 033	046	124		MTC HARMAN KAR HITACHI INSTANT REPI JCL	042 004 DON 0 004 063 AY 03	109 006 012 (018 137 31 03 033 013	116 062 045 026 150	124 101 034	043	NEC NORDMENDE OPTONICA PANASONIC	012 043 053 066 140 013 031	160 014 023 054 070 145 020 034	019 039 074 031	022 043 083 033	028 048 133 063	SHARP SHINTOM	073 031 024 003 057	054 009	149 031		
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS	043 004 034 016 146 072 031	006 043 033 023	046 103 039	124		HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY	042 004 004 063 AY 03 031 012 066 043 012	109 006 012 018 137 31 03 033 013 101	116 062 045 026 150 33 015	124 101 034 033	043 040 048	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS	012 043 053 066 140 013 031 071	160 014 023 054 070 145 020 034 033 101	019 039 074 031 067	022 043 083 033	028 048 133 063	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA	073 031 024 003 057 149 034 013 031	054 009 058 033	149 031 076		078
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC	043 004 034 016 146 072 031 012 035	006 043 033 023 037	046 103 039 129	124		HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN	042 004 004 063 AY 03 031 012 066 043 012 050	109 006 012 018 137 31 03 033 013 101	116 062 045 026 150 33 015	124 101 034	043 040 048	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT	012 043 053 066 140 013 031 071 101	014 023 054 070 145 020 034 033 101	019 039 074 031 067 034	022 043 083 033 054	028 048 133 063	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC	073 031 024 003 057 149 034 013 031	054 009 058 033	149 031 076	077	078
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS	043 004 034 016 146 072 031 012 035 028	006 043 033 023 037	046 103 039 129	124		MTC HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC	042 004 004 063 AY 03 031 012 066 043 012 050 152	109 006 012 (018 137 31 03 033 013 101 031 055	116 062 045 026 150 33 015	124 101 034 033 043 130	043 040 048 150	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER	012 043 053 066 140 013 031 071 101 013	160 014 023 054 070 145 020 034 033 101	019 039 074 031 067	022 043 083 033 054	028 048 133 063	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY	073 031 024 003 057 149 034 013 031 034 010	054 009 058 033	031 076	077	078
TUTURETECH GE VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON	043 004 034 016 146 072 031 012 035	006 043 033 023 037 031	046 103 039 129 033	124		HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN	042 004 004 063 AY 03 031 012 066 043 012 050 152 014	109 006 012 (018 137 31 03 033 013 101 031 055	116 062 045 026 150 33 015	124 101 034 033	043 040 048 150	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND	012 043 053 066 140 013 031 071 101 013 108	023 054 070 145 020 034 033 101	019 039 074 031 067 034	022 043 083 033 054	028 048 133 063	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG	073 031 024 003 057 149 034 013 031 034 010 039	054 009 058 033 034 043	149 031 076 034	077	078
VCRS AIWA AKAI AMPRO ANDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS	034 004 016 146 072 031 012 035 028 108 003	006 043 033 023 037 031	046 103 039 129 033 135	124		MTC HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC	042 004 004 063 AY 03 031 012 066 043 012 050 152	109 006 012 (018 137 31 03 033 013 101 031 055	116 062 045 026 150 33 015	124 101 034 033 043 130	043 040 048 150	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER	012 043 053 066 140 031 031 071 101 013 108 072	023 054 070 145 020 034 033 101	019 039 074 031 067 034	022 043 083 033 054	028 048 133 063	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY	073 031 024 003 057 149 034 013 031 034 010 039 034	054 009 058 033 034 043 039	031 076	077	078
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG UURTIS MATHES	043 004 034 016 146 072 031 012 035 028 108 003	006 043 033 023 037 031 040	046 103 039 129 033 135	124	125	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD	042 004 004 063 AY 03 031 012 066 043 012 050 152 014	109 006 012 (018 137 31 03 033 013 101 031 055	116 062 045 026 150 33 015	124 101 034 033 043 130	043 040 048 150	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR	143 004 012 043 053 066 140 013 031 071 101 013 108 072 011	160 014 023 054 070 145 020 034 033 101 021	019 039 074 031 067 034	022 043 083 033 054	028 048 133 063	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC	073 031 024 003 057 149 034 013 031 034 010 039 034	054 009 058 033 034 043 039 033	031 076 034 043 070	077	078
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG	043 004 034 016 146 072 031 012 035 028 108 003 031 005	006 043 033 023 037 031 040 033 007	046 103 039 129 033 135 041 010	124 043	125	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG	DON (004 004 004 063 031 012 066 043 012 050 050 014 048 154 034	109 006 012 018 137 31 033 013 101 031 055 034	116 062 045 026 150 33 015 033 060 039	124 101 034 033 043 130	043 040 048 150 047	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ	143 004 012 043 053 066 140 013 031 071 101 013 108 072 011 033 013	023 054 070 145 020 034 033 101 021	019 039 074 031 067 034 048	022 043 083 033 054	028 048 133 063 067	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS	0733 0311 0244 0033 0577 1499 0344 0100 0399 0344 0311 0190 034	054 009 058 033 034 043 039 033	031 076 034 043 070	077	067
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG UURTIS MATHES	043 004 034 016 146 072 031 012 035 003 003 003 108	006 043 033 023 037 031 040 033 007 110	046 103 039 129 033 135 041 010	124 043	125	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI	042 004 004 063 043 012 066 043 012 050 152 014 048 044 034 033 034	109 006 012 018 137 31 033 013 101 031 055	116 062 045 026 150 33 015 033 060 039	124 101 034 033 043 130 043	043 040 048 150 047	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR	143 004 012 043 053 066 140 013 031 071 101 013 108 072 011 033 013 041	160 014 023 054 070 145 020 034 033 101 021 014 066 020 062	019 039 074 031 067 034 048	022 043 083 033 054 145 034 107	028 048 133 063 067	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK	073 031 024 003 057 149 034 013 031 039 034 031 019 034	054 009 058 033 034 043 039 033 031	031 076 034 043 070 033	077 059 034	067
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO	043 004 034 016 146 072 031 012 035 028 108 003 031 005	006 043 033 023 037 031 040 033 007 110	046 103 039 129 033 135 041 010	124 043	125	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN	DON (004 063 AY 03 012 050 014 048 154 034 040 003 034 040	109 006 012 (0 018 137 31 03 033 013 101 035 034	116 062 045 026 150 33 015 033 060 039	124 101 034 033 043 130 043	043 040 048 150 047	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA	012 043 053 066 140 013 031 071 101 013 108 072 011 033 013 041	160 014 023 054 070 145 020 034 033 101 021 014 066 020 062 144	019 039 074 031 067 034 048	022 043 083 033 054 145 034 107 147	028 048 133 063 067	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS	073 031 024 003 057 149 034 010 039 034 031 019 034 006 008	054 009 058 033 034 043 039 033 031	031 076 034 043 070 033	077 059 034	067
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG UURTIS MATHES	043 004 034 016 146 072 035 028 108 003 005 108 117	006 043 033 023 037 031 040 033 007 110 119	046 103 039 129 033 135 041 010 111	124 043 064 112	125	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI	042 004 004 063 031 012 066 043 012 050 152 014 048 154 003 034 003 034 0040	109 006 012 (0 018 137 31 03 033 013 101 035 034	116 062 045 026 150 33 015 033 060 039	124 101 034 033 043 130 043	043 040 048 150 047	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR	012 043 053 066 140 013 031 071 101 013 108 072 011 033 041 140 003	160 014 023 054 070 145 020 034 033 101 021 014 066 020 062 144 008	019 039 074 031 067 034 048	022 043 083 033 054 145 034 107 147 014	028 048 133 063 067 040 109	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA	073 031 024 003 057 149 034 010 039 034 031 019 034 006 008	054 009 058 033 034 043 039 033 031	149 031 076 034 043 070 033	077 059 034	067
VCRs AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH	043 004 034 016 146 072 031 012 035 008 108 003 117 108 012 034	006 043 033 023 037 031 040 033 007 110 119	046 103 039 129 033 135 041 010 111	124 043 064 112	125	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN	042 004 004 063 031 012 066 043 012 050 050 152 014 048 154 034 003 034 040 040 040 040	109 006 012 018 137 131 033 101 031 055 034 009 101 033	116 062 045 026 150 33 015 033 060 039	124 101 034 033 043 130 043	043 040 048 150 047 017	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA	012 043 053 066 140 013 031 071 101 013 108 072 011 033 041 140 003	160 014 023 054 070 145 020 034 033 101 021 014 066 020 062 144 008 034	019 039 074 031 067 034 048	022 043 083 033 054 145 034 107 147 014	028 048 133 063 067 040 109	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK	073 031 024 003 057 149 034 010 039 034 031 019 034 006 008	054 009 058 033 034 043 039 033 031	149 031 076 034 043 070 033	077 059 034	067
CVCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME	043 004 016 146 072 031 012 035 003 031 005 108 003 117 108 012 034 059	006 043 033 023 037 031 040 033 007 110 119 023 053	046 103 039 129 033 135 041 010 111	124 043 064 112	125 065 116	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX	042 004 004 063 031 012 066 043 012 050 050 152 014 048 154 034 003 034 040 040 040 040	109 006 012 018 137 131 033 101 031 055 034 009 101 033	116 062 045 026 150 33 015 033 060 039	124 101 034 033 043 130 043 014	043 040 048 150 047 017	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA	012 043 053 066 140 013 031 071 101 013 108 072 011 033 013 013 041 140 003 033	160 014 023 054 070 034 033 101 021 014 066 020 020 144 008 034	019 039 074 031 067 034 048	022 043 083 033 054 145 034 107 147 014	028 048 133 063 067 040 109	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION	073 031 024 003 057 149 034 010 039 034 006 008 082 040 040	054 009 058 033 034 043 039 033 031 013 112 101	149 031 076 034 043 070 033	077 059 034	067
VCRs AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH	043 004 016 146 072 031 012 035 028 108 003 031 108 117 108 012 034 059 006	006 043 033 023 037 031 040 033 007 110 119 023 053 017	046 103 039 129 033 135 041 010 111	124 043 064 112 043	125 065 116	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI	042 004 004 063 031 012 050 050 014 048 154 034 003 034 040 031 068 012	109 006 018 137 137 137 137 103 033 101 035 034 009 101 033 033 033 033 033 033 034	116 062 045 026 150 33 015 033 060 039	124 101 034 033 043 130 043 014	043 040 048 150 047 017	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO	143 004 012 043 053 066 140 013 031 071 101 013 108 072 011 140 003 033 033 041 140 003 101 058 148	023 054 070 145 020 034 033 101 021 014 066 020 062 144 008 034	019 039 074 031 067 034 048	022 043 083 033 054 145 034 107 147 014	028 048 133 063 067 040 109	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR	073 031 024 003 057 149 034 013 031 039 034 031 006 008 008 040	054 009 058 033 034 043 039 033 031 013 112 101	149 031 076 034 043 070 033	077 059 034	067
CVCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME	043 004 016 146 072 031 012 035 003 003 108 015 117 108 012 034 015 019 019 019 019 019 019	006 043 033 023 037 031 040 033 007 110 119 023 053 017 034	046 103 039 129 033 135 041 010 111 039	124 043 064 112 043	125 065 116	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI MEI	042 004 004 063 031 012 050 014 048 154 034 003 031 068 012 101 101 027 031	109 006 018 137 31 03 033 101 035 034 009 101 033 033 033 033 034	116 062 045 026 150 33 015 033 060 039 013 106 034	124 101 034 033 043 130 043 014 041	043 040 048 150 047 017 067 069	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO SALORA	143 004 012 043 053 066 140 013 031 101 013 108 072 011 140 003 033 101 140 140 140 140 140 140 140 140 140	160 014 023 054 070 145 020 034 033 101 021 014 066 020 062 144 008 034	019 039 074 031 067 034 048 075 033 063 145 010 040	022 043 083 033 054 145 034 107 147 014 053	028 048 133 063 067 040 109 031 054	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR VIDEO	073 031 024 003 057 149 034 013 031 039 034 031 019 034 040 040 040 040	054 009 058 033 034 043 039 033 031 013 112 101	149 031 076 034 043 070 033	077 059 034	067
CVCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME	043 004 016 146 072 031 012 035 028 108 003 015 117 108 012 034 059 006 031 046	006 043 033 023 037 031 040 033 007 110 119 023 053 017 034	046 103 039 129 033 135 041 010 111 039	124 043 064 112 043	125 065 116	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI	042 004 004 063 031 012 050 050 152 014 034 033 034 048 031 066 043 031 050 015 040 031 031 040 040 040 040 040 040 040 040 040 04	109 006 018 137 31 03 033 003 101 031 035 034 009 101 033 031 031 033 033 033 034	116 062 026 150 033 015 033 060 039 013 106 034	124 101 034 033 043 130 043 014 041 067	043 040 048 150 047 017 067 069	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO	012 043 053 066 140 013 031 071 101 033 041 140 003 033 101 058 8 4 4 4 4 04 04 032	160 014 023 054 070 145 020 034 033 101 021 014 066 062 062 144 008 034	019 039 074 031 067 034 048 075 063 063 063 010 040	022 043 083 033 054 145 107 147 014 053	028 048 133 063 067 040 109 031 054	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR VIDEO CONCEPTS	073 031 024 003 057 149 034 013 031 039 034 006 008 040 040 040 048 048	054 009 058 033 034 043 039 033 031 013 112 101	149 031 076 034 043 070 033	077 059 034	067
CVCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME	043 004 016 146 072 031 012 035 003 003 108 015 117 108 012 034 015 019 019 019 019 019 019	006 043 033 023 037 031 040 033 007 110 119 023 053 017 034 101	046 103 039 129 033 135 041 010 111 039 025 035 129	124 043 064 112 043 027 036 131	125 065 116	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI MEI	042 004 004 063 031 012 050 043 012 050 043 015 043 034 040 031 034 040 031 031 032 031 031 043 043 043 043 043 044 048 048 049 049 049 049 049 049 049 049 049 049	109 006 018 137 131 033 003 101 031 055 034 009 101 033 033 033 034 035 036 037 037 038 038 038 039 039 039 039 039 039 039 039	116 062 026 150 033 015 033 060 039 013 106 034	124 101 034 033 043 130 043 014 041	043 040 048 150 047 017 067 069	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO SALORA	012 043 053 066 140 013 031 071 101 033 041 140 003 033 101 058 148 014 032 107	160 014 023 054 070 145 020 034 033 101 021 040 666 020 062 144 040 034	019 039 074 031 067 034 048 075 033 145 010 040	022 043 083 033 054 145 107 147 014 053	028 048 133 063 067 040 109 031 054	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR VIDEO CONCEPTS VIDEOSONIC	073 031 024 003 057 149 034 013 031 039 034 006 008 040 040 040 040 040 040 040 040 040	054 009 058 033 034 043 039 033 031 101 012	149 031 076 034 043 070 033 042 131	077 059 034	078 067 103 059
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME EMERSON	043 004 034 016 146 072 031 012 035 108 003 117 108 012 036 031 046 031 046 031 034	006 043 033 023 037 040 033 053 017 034 101 008	046 103 039 129 033 135 041 010 111 039 025 035 129 009	124 043 064 112 043 027 036 131 010	065 116 029 037 138	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI MEI	042 004 004 063 031 012 066 043 012 050 152 014 034 034 040 031 034 040 031 034 043 034 043 043 043 043 043 043 043	109 006 018 137 131 033 003 101 031 055 034 009 101 033 033 033 034 035 036 037 037 038 038 038 039 039 039 039 039 039 039 039	116 062 026 150 033 015 033 060 039 013 106 034 033	124 101 034 033 043 130 043 014 041 067	043 040 048 150 047 017 067 069	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO SALORA	012 043 053 066 140 013 031 071 101 013 108 003 013 041 140 003 033 101 058 148 014 014 158 168 178 188 188 188 188 188 188 188 188 18	023 054 070 145 020 034 033 101 021 014 066 020 062 144 008 034	019 039 074 031 067 034 048 075 033 145 010 040	022 043 083 033 054 145 034 107 147 014 053	028 048 133 063 067 040 109 031 054	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR VIDEO CONCEPTS	073 031 024 003 057 149 034 013 031 034 006 008 082 040 040 040 040 040 040 040 040 040 04	054 009 058 033 034 043 039 033 031 112 101 012	031 076 034 043 070 033 042 131	077 059 034	078 067 102 059
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC ANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME EMERSON	043 004 016 146 072 031 012 035 028 108 003 117 108 012 034 046 153 003 034 031	006 043 033 023 037 031 040 033 077 034 101 008 033	046 103 039 129 033 135 041 010 111 039 025 035 129 009 063	124 043 064 112 043 027 036 131 010	065 116 029 037 138	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI MEI MEMOREX MGA MINOLTA	042 004 004 063 031 012 066 043 012 050 152 014 034 034 040 031 034 040 031 034 043 034 043 043 043 043 043 043 043	109 006 012 (018 137 131 03 033 101 035 034 009 101 033 033 033 033 033 033 033	116 062 026 150 033 015 033 060 039 013 106 034 033	124 101 034 033 043 130 043 014 041 067	043 040 048 150 047 017 067 069	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO SALORA SAMSUNG	012 043 053 066 140 013 031 071 101 013 108 072 011 103 303 101 140 003 033 101 140 003 041 140 003 058 148 014 015 015 015 015 015 015 015 015 015 015	160 014 023 054 070 145 020 034 033 101 021 014 066 020 040 144 008 034	019 039 074 031 067 034 048 075 033 063 145 010 040	022 043 083 033 054 145 034 147 014 053	028 048 133 063 067 040 109 031 054 105 115	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR VIDEO CONCEPTS VIDEOSONIC	073 031 024 003 057 149 034 013 031 034 006 008 082 040 040 040 040 040 040 040 040 040 04	054 009 058 033 034 043 039 033 031 012 012 034 033 034	031 076 034 043 070 033 042 131	077 059 034 047	078 067 101 059
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME MERSON EISHER FUNAI	043 004 016 146 072 031 012 035 008 003 003 117 108 012 034 059 006 031 046 153 003 034 031 109	006 043 033 023 037 031 040 033 007 110 023 053 017 034 101 008 033 144	046 103 039 129 033 135 041 010 111 039 025 035 129 009 063	124 043 064 112 043 027 036 131 010	065 116 029 037 138	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI MEI MEMOREX MGA	042 004 004 063 031 012 050 152 050 154 048 154 034 040 031 068 042 101 003 034 134 045 045 045 047 047 048 048 049 049 049 049 049 049 049 049 049 049	109 006 012 018 137 131 033 101 031 055 034 009 101 033 030 033 010 053 139 053 010 053 053 053 054 055 055 055 055 055 055 055	116 062 026 150 026 150 033 060 039 013 106 034 072 059 045	124 101 034 033 043 130 043 014 041 067	043 040 048 150 047 017 067 069	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO SALORA SAMSUNG SANSUI SANYO	012 043 053 066 140 013 031 071 101 033 041 041 003 033 101 058 404 04 04 05 05 05 05 07 07 01 01 01 01 01 01 01 01 01 01 01 01 01	160 014 023 054 070 145 020 034 033 101 021 014 066 020 040 109 122 043 007	019 039 074 031 067 034 048 075 033 303 145 010 040	022 043 083 033 054 145 014 053 104 113 135 014	028 048 133 063 067 040 109 031 054 105 115 102	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR VIDEO CONCEPTS VIDEOSONIC WARDS	073 031 024 003 057 149 034 010 034 001 003 040 040 040 048 040 040 040 040 040 040	054 009 058 033 034 043 039 033 031 013 112 101 012 034 034 034	031 076 034 043 070 033 042 131 046 017 040	077 059 034 047	078 067 101 059
VCRS AIWA AKAI AMPRO ANAM AUDIO DYNAMICS BROKSONIC CANON CAPEHART CRAIG CURTIS MATHES DAEWOO DAYTRON DBX DYNATECH ELECTROHOME EMERSON	043 004 016 146 072 031 012 035 028 108 003 117 108 012 034 046 153 003 034 031	006 043 033 023 037 031 040 033 017 023 053 017 008 033 144 136	046 103 039 129 033 135 041 010 111 039 025 035 129 009 063 147	064 112 043 064 112 043 027 036 131 010 072	065 116 029 037 138	HARMAN KAR HITACHI INSTANT REPI JCL JCPENNY JENSEN JVC KENWOOD LG LLOYD LXI MAGIN MAGNAVOX MARANTZ MARTA MATSUI MEI MEMOREX MGA MINOLTA	042 004 004 063 031 012 050 152 050 154 048 154 034 040 031 068 042 101 003 034 134 045 045 045 047 047 048 048 049 049 049 049 049 049 049 049 049 049	109 006 012 (0 018 137 31 03 033 101 031 055 034 009 101 033 030 033 030 031 031 035 034	116 062 026 150 026 150 033 060 039 013 106 034 072 059 045	124 101 034 033 043 130 043 014 041 067	043 040 048 150 047 017 067 069	NEC NORDMENDE OPTONICA PANASONIC PENTAX PHILCO PHILIPS PILOT PIONEER PORTLAND PULSAR QUARTZ QUASAR RCA REALISTIC RICO RUNCO SALORA SAMSUNG	012 043 053 066 140 013 071 101 013 072 011 033 041 140 003 033 101 058 148 014 032 107 120 022 032 031 041 041 041 041 041 041 041 041 041 04	023 054 070 145 020 034 033 101 021 040 062 040 109 122 043 007	019 039 074 031 067 034 048 075 033 063 145 010 040	022 043 083 033 054 145 034 107 147 014 053 104 113 135 014 129	028 048 133 063 067 040 109 031 054 105 115 102 131	SHARP SHINTOM SONY SOUNDESIGN STS SYLVANIA SYMPHONIC TANDY TATUNG TEAC TECHNICS TEKNIKA THOMAS TMK TOSHIBA TOTEVISION UNITECH VECTOR RESEA VICTOR VIDEO CONCEPTS VIDEOSONIC WARDS	073 031 024 003 057 149 034 010 039 034 006 008 040 040 040 040 040 040 040 040 040	054 009 058 033 034 043 039 033 031 012 034 034 034 034 034	031 076 034 043 070 033 042 131 046 017 040	077 059 034 047 024 053 043 056	078 067 101 059

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Other Manufacturers Brand Names and Programming Codes

VCR/DVE APEX DIGITAL DENON GE GOLDSTAR HARMAN KARDI	222 220 214 205 206 210 216 225	JVC LG MAGNAVOX MARANTZ MITSUBISHI NAD ONKYO	212 201 210 216 225 213 224 202 223 208 217	PANASONIC PHILIPS PIONEER PROCEED PROSCAN RCA SAMSUNG	203 209 213 204 226 221 205 206 205 206 211 215	SONY THOMPSON TOSHIBA YAMAHA ZENITH	207 205 206 219 208 209 218 210 216 225
Cable Bo	exes	GEMINI	008 022 025 054	PHILIPS	006 012 013 020 065	SIGNATURE	052
ABC	003 004 039 042 046	GI GOLDEN CHAI	052 074 NNEL 030	PIONEER	085 090 034 051 052 063 076	SL MARX SPRUCER	030 047 078
ANTRONIK	052 053 014	HAMLIN HITACHI	049 050 055 052 055	POST NEWS V PRUCER	VEEK 016 059	STARCOM STARGATE	002 004 008 009 008 030
ARCHER	005 007 014 024	HOSPITALITY		PTS	011 048 071 072 073	SYLVANIA	067
CABLE STAR CENTURION	026 092	JERROLD	002 003 004 008 009 010 052 069 074	PULSAR	074 001	TADIRAN TANDY	030 017
CENTURY	007	LG	058 101	RCA	047	TEXSCAN	029 067
CITIZEN COLOUR VOICE	007 065 090	M-NET MACOM	037 033	REGAL REGENCY	049 050 057	TOCOM TOSHIBA	039 040 056 001
COMBANO	080 081	MAGNAVOX	010 012 064 079	REMBRANT	025	UNIKA	007 014 024
COMTRONICS DIAMOND	019 030 023	MEMOREX MOVIE TIME	001 028 032	RK SAMSUNG	091 030 061 068 083	UNITED CABI UNIVERSAL	LE 004 053 005 007 014 024 026
EAGLE	020 030 040	NSC	015 028 038 071 073	SCIENTIFIC A	TLANTA 003 011 041		027 032 035
EASTERN ELECTRICORD	057 062 066 032	OAK PANASONIC	016 031 037 053 044 047	SHERITECH	042 043 045 046 022	VIEWSTAR	012 015 018 086 087 088 089
GE	072	PARAGON	001	SIGNAL	030	ZENITH	001 021 060 093
Cable Sat	tellite		232	MACOM	120 169 173 174		195
ALPHASTAR DSR		ELECTRO HOM		MEMOREY	175	SCIENTIFIC	4/0.0/0
AMPLICA	160	EUROPLUS FUJITSU	224 127 131 132 137	MEMOREX NEXTWAVE	167 138 234 235	ATLANTA SONY	142 248 213
BIRDVIEW BSR	161 236 239 163	CENEDAL INC	243 244	NORSAT	179 180	STARCAST	151
CAPETRONICS	163	GENERAL INS	FRUMENT 113 114 126 139 141 169 211	PACE SKY SAT PANASONIC	ELLITE 219 170 202	SUPER GUIDE TEECOM	130 234 235 133 136 185 197
CHANNEL MAST	ER 123 124 125 128 146 165	HITACHI	144 177	PANSAT CA	231		198 200 217 240
CHAPARRAL	118 119 122 187	HOUSTON TRA	CKER 143 147 149 161 167 214	PERSONAL CA PHILIPS	BLE 227 181	TOSHIBA	247 112 237
CITOH CURTIS MATHES	164 5 160 228	HUGHES HYTEK	178 163	PICO PRESIDENT	215 129 212	UNIDEN	126 135 152 153 154 155 158 159
DRAKE	115 116 117 120	JANIEL	170 241	PRIMESTAR	140 220 221		188 189 190 196
	121 162 222 226 183	JERROLD KATHREIN	171 218	PROSAT RCA	182 176 216	UNIDEN	211 245 246
DX ANTENNA	134 156 166 186	LEGEND	167	REALISTIC	153 184	VIEWSTAR	225
ECHOSTAR	148 150 167 168 203 204 205 206	LG LUTRON	249 242	SAMSUNG SATELLITE	233	WINEGARD ZENITH	238 229 111 191 192 193
	207 208 209 210	LUXOR	172 223	SERVICE CO	138 145 157 167	ZENIIII	194 201 230
AUX Aud	io	LUXMAN	017	OPTIMUS	011 013 022	SHARP	013 029 043 045
GOLDSTAR	005	MARANTZ	002 021 028 030 032 035	PANASONIC PIONEER	003 015 036 046 007 016 020 023	SHERWOOD SONY	012 019 027 034 038 048
HITACH	010	NAD	014	FIUNLLK	024 026 033 037	JUNI	053
JVC KENWOOD	006 039 049 050 001 013 029 031	NAKAMICHI ONKYO	051 052 008 009 025 040	QUASAR	047 003 036	SOUNDESIGN TOSHIBA	018 042
	044	ONKTO	041	RCA	004	VICTOR	006 039
Audio CD	Players		144 154 155 198	DAMAGONTO	170		200 204 210 150
ADC	104	LUXMAN	200 216 217 108 123 153 173	PANASONIC	106 151 176 184 203 219 233	SHERWOOD	217 102 115 116 128
AIWA	149 178 189 202 212	MAGNAVOX	127 135 172 179	PHILIPS	127 135 195 199		141 193
AKAI	134 165 200	MARANTZ	180 129 135 141 159	PIONEER	237 107 124 167 171	SONY	100 142 168 174 182 183 192 208
DENON	101 190 221 222 223		224 225 226		179 187 191 205	TECHNICS	234 235 236
EMERSON	133 136 152 166	MCS MITSUBISHI	111 147 156 169 120 179 229 230	QUASAR	206 207 106 176	TECHNICS	106 148 151 176 184 203 214 218
FISHER	175 113 122 138 140		231	RADIO SHACK	186 188	TEAC	103 112 132 141
	168	ONKYO	125 126 130 131 213 215 232	RCA	114 133 157 166 114		160 161 132 177 185 161 197 201
GE HITACHI	209 133 166	OPTIMUS	100 107 110 124	SANYO	121 140 158 168	YAMAHA	109 119 137 143
JVC	117 196 227 228		139 140 145 146 162 163 164 165	SEARS SHARP	147 110 141 150 181		194 211
KENWOOD	105 110 113 118						
206 2767							

Key functions list for your remote control

KEY NAME	TV Mode Zenith Code 101	VCR Mode Zenith Code 201	Cable Mode Zenith Code 353	AUX Mode (DVD) Zenith Code 960
POWER	TV On/Off	VCR On/Off	Cable Box On/Off	AUX TV/DISC
CABLE	Selects Cable	Selects Cable	Selects Cable	Selects Cable
VCR	Selects VCR	Selects VCR	Selects VCR	Selects VCR
AUX	Selects Aux	Selects AUX	Selects Aux	Selects AUX
TV	Selects TV	Selects TV	Selects TV	Selects TV
SURF	Surf On/Off	VCR SP/EP	CABLE FC Fav Ch	AUX Audio
FLASHBK	TV Flashback	VCR Flashback	Cable Flashback	AUX Return
MUTE	TV Mute	TV Mute	TV Mute	TV Mute
CHANNEL UP	TV Channel Up	VCR Channel Up	Cable Channel Up	AUX Skip >>
CHANNEL DOWN	TV Channel Down	VCR Channel Down	Cable Channel Down	AUX Skip <<
VOLUME (RIGHT)	TV Volume Louder	TV Volume Louder	TV Volume Louder	TV Volume Louder
VOLUME (LEFT)	TV Volume Quieter	TV Volume Quieter	TV Volume Quieter	TV Volume Quieter
1	TV Digit 1	VCR Digit 1	Cable Digit 1	AUX Digit 1
2	TV Digit 2	VCR Digit 2	Cable Digit 2	AUX Digit 2
3	TV Digit 3	VCR Digit 3	Cable Digit 3	AUX Digit 3
4	TV Digit 4	VCR Digit 4	Cable Digit 4	AUX Digit 4
5	TV Digit 5	VCR Digit 5	Cable Digit 5	AUX Digit 5
6	TV Digit 6	VCR Digit 6	Cable Digit 6	AUX Digit 6
7	TV Digit 7	VCR Digit 7	Cable Digit 7	AUX Digit 7
8	TV Digit 8	VCR Digit 8	Cable Digit 8	AUX Digit 8
9	TV Digit 9	VCR Digit 9	Cable Digit 9	AUX Digit 9
0	TV Digit 0	VCR Digit 0	Cable Digit 0	AUX Digit 0
ENTER	TV Enter	VCR Enter	Cable Enter	Aux Display
MENU	TV Menu	VCR Menu	Cable Menu	AUX Menu
UP ARROW	TV Select Up	VCR Select Up	Cable Up Arrow	AUX Up Arrow
DOWN ARROW	TV Select Down	VCR Select Down	Cable Down Arrow	AUX Down Arrow
LEFT ARROW	TV Adjust Left	VCR Adjust Left	Cable Left Arrow	AUX Title
RIGHT ARROW	TV Adjust Right	VCR Adjust Right	Cable Right Arrow	AUX Subtitle
QUIT	TV Menu Quit	VCR Quit	Cable Quit	AUX Resume
RATIO	TV Aspect Ratio DsplyMde	No Function	No Function	AUX Zoom
VIDEO	TV Z-Video Selection	No Function	No Function	AUX Clear
SIGNAL	TV Signal Strength	VCR VCR+	Cable Day Up	AUX Marker
AUDIO	TV Audio Selection	VCR Eject	Cable Day Down	AUX Marker Search
DASH	TV Dash "-"	VCR CM Skip	Cable Pg Up	AUX Repeat-Chap
CC	TV Closed Captions	VCR Memory	Cable Pg Down	AUX Memory
TIMER	TV Timer	VCR Timer	Cable Timer	AUX Program
SOURCE	TV Sources	TV Tuner or VCR Tuner	Cable Info	AUX Open/Close
RECORD	VCR Record	VCR Record	Cable Buy	AUX Angle
PAUSE	VCR Pause	VCR Pause	Cable Guide	AUX Pause
REWIND	VCR Rewind	VCR Rewind	VCR Rewind	AUX Scan <<
PLAY	VCR Play	VCR Play	VCR Play	AUX Play
STOP	VCR Stop	VCR Stop	VCR Stop	AUX Stop/Eject
F FWD	VCR Fast Forward	VCR Fast Forward	VCR Fast Forward	AUX Scan >>
MBR4286	P124-00240 2/12			

 $\overset{\circ}{\circ}$

Some of the functions shown above may not be available on your equipment.

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Maintenance

Routine TV cabinet and screen cleaning

Careful and regular cleaning can extend the useful service life of the TV. Be sure to turn the power off and pull out the plug before you begin any cleaning.

Screen Cleaning

- 1. Here's a great way to keep the dust off the screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
- 2. Make sure the excess water is off the screen, and then let it air-dry before turning the TV on.

Cabinet Cleaning

- 1. Use a soft cloth with a mild soap solution to wipe the cabinet. (Don't use any harsh, industrial strength variety of cleaner.)
- 2. Rinse the cloth and wipe the cabinet again.
- 3. Let the cabinet air-dry before turning the TV on.

Wood Cabinet

Use a quality wood cleaner and polish. This will protect the TV from dirt and dust, as well as keep the cabinet looking new.

Extended Absence

If you leave your TV dormant (Off) for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges. If you use an off-air antenna, you may also want to disconnect it from the back of your TV before leaving.



If you unplug the TV, you may have to reset the clock using the Clock Set menu described earlier. See page 32.

Troubleshooting

Some quick and easy tips to resolving problems

Symptoms	Possible Cause(s)	Possible Solution(s) See	page(s)
Power			
No Power.	AC Power Cord not connected.Local power failure?	-Connect power cord. Try a different household outletContact power company for information.	8 - 14
No Source image.	Source turned off.Source not selected.	-Turn Source equipment onUse SOURCE to choose desired picture and sound source.	19 19
Picture Reception			
Poor or no picture.	TV station problems.Video menu not adjusted properly.	-Try a different channel. -Check Video menu option settings.	17/19 30
Local interference.	• Check for disturbing source.	The following may cause image problems or distortion: Electrical appliances, powerful lights, cars, trucks; compute portable phones; medical equipment; VCR to close to TV,	
	• Appliance too close to TV.	-If possible increase the distance between your Entertain Machine and the offending appliance. Or shut one of ther	nment
Poor or no color.	Sub-standard broadcast.Sub-standard cable signal.	-Try a different channelNotify cable company of reception problem.	17/19
Picture wobbles or drifts.	• CATV wire not connected or loose.	-Make or tighten connection.	9/11
	 Local interference. 	-Try different channel. Turn off interfering appliance.	17/19
	• Scrambled CATV channel.	-Tune to unscrambled channel.	17/19
No CATV reception.	• Wrong cable band.	-Try Std, HRC, IRC or contact cable company for cable bar	
	• Cable wire not connected.	-Connect cable service wire to Ant 1.	18/9/11
	Cable service interrupted.Antenna set, not Cable (CATV).	-Contact cable service. -Select Cable in EZ Scan menu.	18
Images in picture distorted.	• Wrong aspect ratio.	-Use RATIO to change picture proportion.	19/35
Poor or no sound.	• Audio muted.	-Press MUTE or VOL (Volume) + key to increase sound leve	el. 19
	• Broadcast problem.	-Tune to a different channel.	17/19
TV turns On.	• On-Timer turned TV On.	-Cancel On-Timer and/or turn TV off.	33
TV turns Off.	• Sleep Timer turned TV Off.	-Turn TV back on.	34
	• Off-Timer turned TV off.	-Cancel Off-Timer and /or turn TV off.	33
No Closed Captions or Text.	• Not available on show.	-Check local TV listings to see if available on broadcastRelocate over-the-air antenna.	
	• Not turned on.	-Try a different channel with Closed Captions or TextPick a Closed Caption or Text option and turn Captions o	17/19 n. 36
Lock (Parental Control) Pro	blems		
Block	Viewing is restricted by Lock.	-Key-in password and turn Lock On/Off (Restrictions) off.	
appears on screen.		Set individual restriction options in Lock menu to Off.	
	5 (1)	-Set Lock On/Off option to Off in Lock menu.	39/40/41
	 Don't know password. 	-Tune to channel without Lock "Content" restrictions.	17/19

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Troubleshooting

Some quick and easy tips to resolving problems

	Possible Cause(s)	Possible Solution(s)	Page(s
Using Remote Control			
Remote does not work.	• Wrong mode selected.	-Press correct mode key to change mode (TV for TV opera	tion.) 1
	 Not aimed at remote sensor. 	-Point remote at Front Control Panel.	1
	 Remote too far from TV or 	-Move remote closer to TV or darken room.	
	too much light in room.		
	 IR path to TV interrupted. 	-Remove obstructions.	
	 Weak batteries. 	-Replace batteries.	
	 Wrong battery polarity. 	-Check that "+" and "-" match in battery compartment.	
Remote does not operate	 Product Mode not programmed. 	-Program for other equipment: VCR, AUX, etc.	42-4
accessory product.	• Product not IR controlled.	-Remote only controls IR equipment.	
Menu Operation			
Menu options can't be	• Software lock-up.	-Unplug power cord for 5 minutes to unlock software.	3
changed or selected.	·	(Reset clock if necessary.)	
Timers do not work.	• Clock not set.	-Set clock.	32
	• Daylight Savings Time wrong.	-If not observed in your area, set to Off.	
Picture Viewing Problem	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall	3; 3;
Picture Viewing Problems Image looks wrong.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menu.	3; 3; y. 3;
	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's imageMove antenna, check connection/location.	33 33 y. 33
Image looks wrong.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. s Wrong Aspect Ratio. Wrong Ant. connection/location. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable input.	33, 33, 32, 32, 32, 33, 33, 33, 33, 33,
Image looks wrong.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. s Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable inputSet TV/VCR button on your VCR correctly.	33 33 34 35 35
Image looks wrong.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. s Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. Wrong tuning mode. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable input.	33 34 35 35 36 10/1:
Image looks wrong.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. s Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. Wrong tuning mode. Wrong output channels selected. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable inputSet TV/VCR button on your VCR correctlyAre you in TV or cable tuning mode, and should be in them to the total same channel (3 or 4).	33 34 35 35 10/1: ne other
Image looks wrong.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. s Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. Wrong tuning mode. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable inputSet TV/VCR button on your VCR correctlyAre you in TV or cable tuning mode, and should be in the Make sure output channels tuned on all A/V equipment are	3! 10/1: ne other
Image looks wrong.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. s Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. Wrong tuning mode. Wrong output channels selected. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable inputSet TV/VCR button on your VCR correctlyAre you in TV or cable tuning mode, and should be in them to the total same channel (3 or 4).	33 34 35 36 37 39 39 40 40 40 40 40 40 40 40 40 40 40 40 40
Image looks wrong. Snowy or Poor Picture Picture has a big black box	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. S Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. Wrong tuning mode. Wrong output channels selected. Loose connection. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable inputSet TV/VCR button on your VCR correctlyAre you in TV or cable tuning mode, and should be in they as they are output channels tuned on all A/V equipment are same channel (3 or 4)Check that all connections are tight. -The CC (closed caption) option may be in Text 1, 2, 3, or	32 32 35 36 10/11 10 other 10/12
Image looks wrong. Snowy or Poor Picture Picture has a big black box on it, but the sound is O.K.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. S Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. Wrong tuning mode. Wrong output channels selected. Loose connection. Caption/Text mode turned on. 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable inputSet TV/VCR button on your VCR correctlyAre you in TV or cable tuning mode, and should be in th-Make sure output channels tuned on all A/V equipment are same channel (3 or 4)Check that all connections are tight. -The CC (closed caption) option may be in Text 1, 2, 3, or -Select CC 1, or OFF in the Caption/Text menuPlug AC power cord inCheck that your AC power outlet works. (Test it by pluggents)	36 37 37 38 39 39 10/11 ne other e on the 10/11 or 4 mod 36
Image looks wrong. Snowy or Poor Picture Picture has a big black box on it, but the sound is O.K.	 Time does not set automatically. Auto Mode doesn't work. Auto Clock doesn't work. S Wrong Aspect Ratio. Wrong Ant. connection/location. TV/VCR button set wrong. Wrong tuning mode. Wrong output channels selected. Loose connection. Caption/Text mode turned on. AC power not plugged in? 	-Set clock manually, or try tuning to PBS stationSet PBS station on Clock menuTurn Auto Clock option "Off" in menu, set clock manuall -Use correct aspect ratio for source's image. -Move antenna, check connection/locationCheck cable inputSet TV/VCR button on your VCR correctlyAre you in TV or cable tuning mode, and should be in th-Make sure output channels tuned on all A/V equipment are same channel (3 or 4)Check that all connections are tight. -The CC (closed caption) option may be in Text 1, 2, 3, or -Select CC 1, or OFF in the Caption/Text menu.	36 37 37 38 39 39 10/11 ne other e on the 10/11 or 4 mod 36

Troubleshooting (Continued)

Symptoms	Possible Cause(s)	Possible Solution(s) Page(s)	
Sound/Audio Problems			
Normal picture but no sound.	 Check volume levels. Try another channel. A/V cables incorrectly connected. Audio Out cables installed wrong. Speakers turned off. No SAP signal. 	-Make sure the TV sound is not mutedThe problem may be the broadcast, not your TVInstall the Audio cables correctlyInstall external amplifier cables correctlyTurn speakers on in the Audio menuIf the Audio Mode is set to SAP, the channel may not have an SAP program.	19 17/19
HD/DVD Problems			
Picture looks wrong.	• Wrong Aspect Ratio.	-Use correct aspect ratio for source's image.	35
No picture or sound.	 Wrong source selected on TV. Source equipment turned off. Tape or Disk not playing. 	-Select correct source equipmentTurn source equipment onPress "PLAY" on source equipment.	19
	 Wires incorrectly connected. 	-Install wires correctly on TV and equipment.	8 - 14
No HD-IN sound.	 Audio cables not connected to HD-In R-L Audio. 	-Connect audio cables to HD-In R-L Audio.	14
A distorted, dark double image appears on the screen.	 A progressive source is connected to the HD IN/DVD IN jacks. 	-Switch your DVD player or set-top box to interlaced.	13/14
Digital Audio Optical Pr	oblems		
No sound.	 Wrong sound source selected on audio equipment. 	-Select TV input source on audio equipment.	
	 No audio optical connections. 	-Connect audio optical cable to TV and audio equipment	. 16

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A list of definitions for some of the words found in this guide

75 OHM RF CABLE The wire that comes from an off-air antenna or cable service provider. The end looks like a hex-shaped nut with a

wire sticking through the middle. It screws onto the threaded jack on the back of the TV.

300 TO 75 OHM

ADAPTER

A small device that connects a two-wire 300 ohm antenna to a 75 ohm RF jack.

They are usually about an inch long with two screws on one end and a round opening with a wire sticking out on

the other end.

A/V CABLES Audio/Video cables. Three cables bunched together—right audio (red), left audio (white), and video (yellow).

A/V cables are used for stereo playback of videocassettes and for higher quality picture and sound from other

A/V devices.

A/V DEVICE Any device that produces video or sound (VCR, DVD, cable box, or television).

ADDED Lets you add new channels to channel scan list that you'll scroll through.

AMPLIFIER An electronic device that amplifies sound from a television, CD player, VCR, DVD or other A/V equipment.

ANALOG Standard channel broadcast format. Usually identified as UHF and VHF.

ANTENNA The physical receiver of television signals sent over the air. A large metal piece of equipment does not always have

to be visible for your home to be using an antenna.

DELETED Lets you remove channels from the channel scan list that you'll scroll through.

DTV Digital TV. Digital channels are usually identified with dash "-" numbers: 9-1, 9-2, etc. if active.

EZ SCAN Channel search; automatically finds the active channels available in your area.

INPUT Refers to the jack that receives a signal from a TV, VCR or other A/V device.

JACK An input or output connection on the back of a TV, VCR, or other A/V device.

MONO SOUND Mono (monaural) sound is one channel of sound. With more than one speaker, all the speakers play the same audio.

OUTPUT Refers to the jack that sends a signal out of a VCR, DVD, or other A/V device.

2ND AUDIO Second Audio Programming (SAP) is another, separate, audio channel available with some programming.

PROGRAMMING/SAP Choosing SAP often refers to listening to audio in another language, such as Spanish or French.

SIGNAL Picture and sound traveling through a cable, or over the air, to your television screen.

STEREO SOUND Stereo (Stereophonic) sound refers to audio that's divided into right and left sides.

TUNER Device that picks up the signal and turns it into picture and sound.

Notes	
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No. 2707	Notes	
26-PDD		
NEAVEZ		
NA.170		
NA.THE		
NACE 5.5		
200.1787 D.A.C.E. S.E.		
20-1707 PACE 5.5		
288-3782 P.A.C.E. 5.E.		
206-3107 P.A.C.E. E.E.		
29-37s7		
289-3787		
289-3787 DAGE EE		
295-1757 D.A.G.E. E.E.		
204-3757 D.A.C.C. E.E.		
205-3787 PAGE 5.5		
206-3787 PAGE 5.5		
205-3767 PAGE 5.5		
206-3767 P.C.C. E.E.		
206-3767 PACE EE		
205-3767 PACE EE		
206-3767 PACE EE		
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Zenith TV Models: C32V23 • C36V23 • C34W23 Warranty



Zenith will repair or replace your product, at Zenith's option, if it proves to be defective in material or workmanship under normal use, during the warranty period listed below from the date of original consumer purchase. This warranty is available only to the original, end user purchaser of the product and effective only when used in the United States, excluding U.S. Territories. Zenith is not responsible for deinstallation or reinstallation of unit.

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	In-Home service: Please retain your bill of sale for	
90 Days from date of purchase.	proof of warranty.	
	Please call 1-877-9Zenith (1-877-993-6484)	
One Year from the date of purchase.	to locate your nearest Zenith Authorized Service	
Picture tube two years.	Center. Repair parts or a replacement may be new or remanufactured. Please see below for further information.	
	90 Days from date of purchase. One Year from the date of purchase.	

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